

The Chemist & Druggist

JUNE 24
1950

ANNUAL
**SPECIAL
ISSUE**

White Magic

The Chinese have used kaolin since antiquity and have ascribed to it magical powers. Scientific research has since confirmed its value for intestinal disorders.

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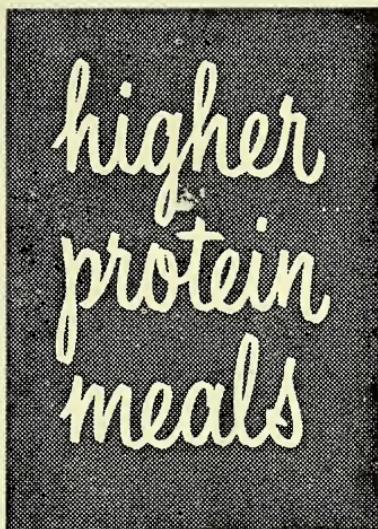
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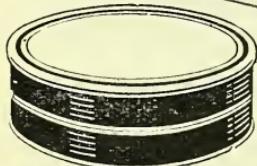
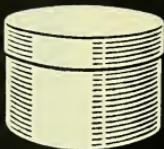
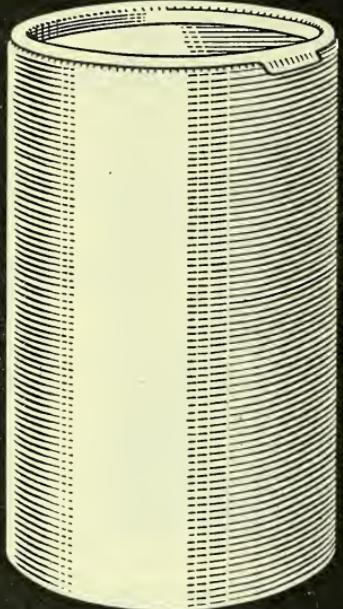
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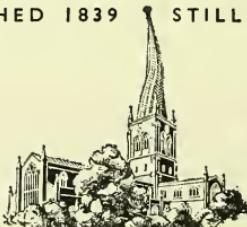
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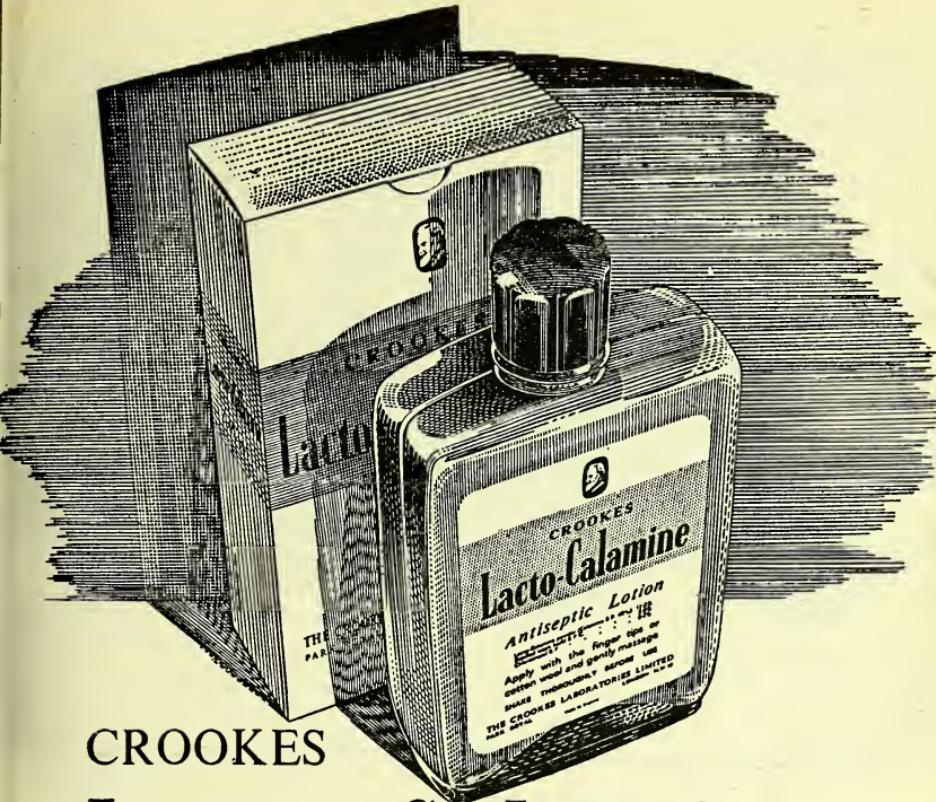
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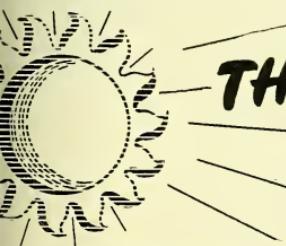
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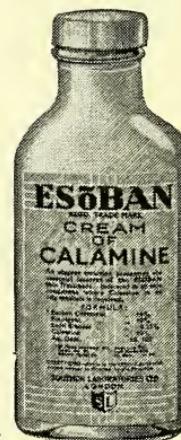
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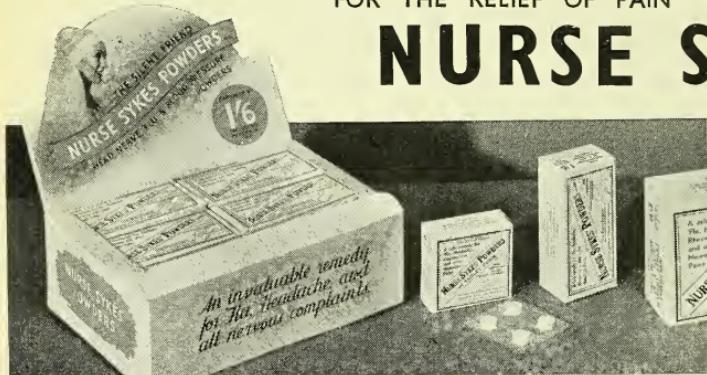
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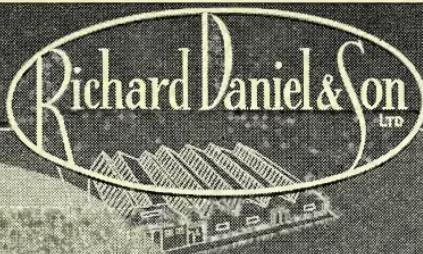
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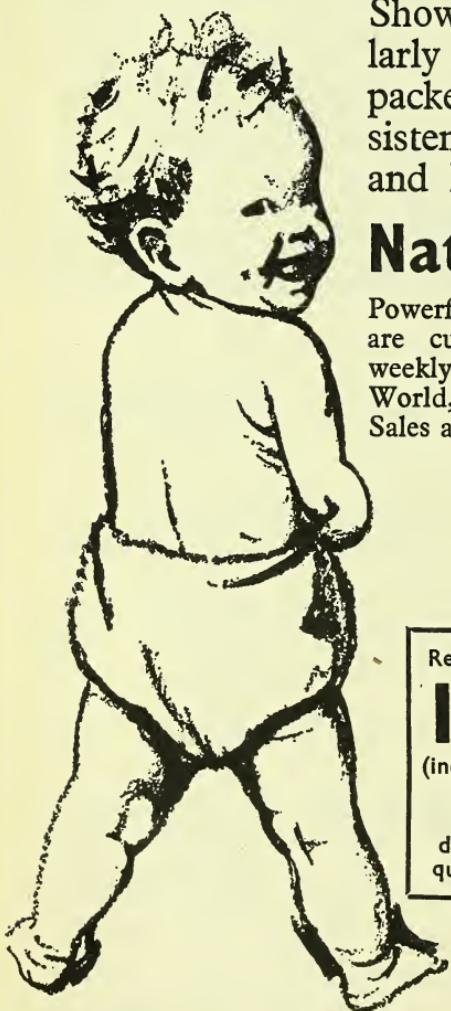
For Baby—For Mother—For You!

Right for Baby's Delicate skin. Right for Mother who wants the best at moderate price. And right for YOU because Zac Baby Cream is a first class 'repeater'

Shows you excellent profit (particularly when ordered with other packed pharmaceuticals)! And is consistently backed by both National and Local advertising.

Nationally Advertised

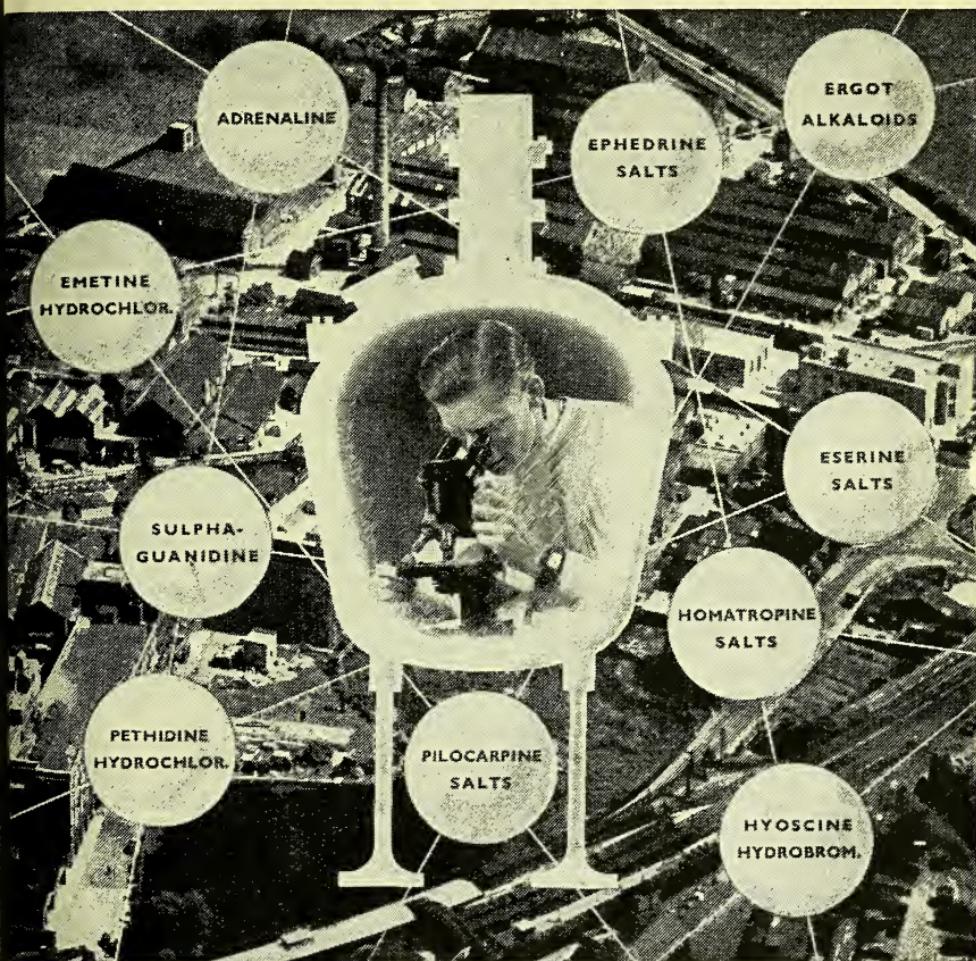
Powerful advertisements for ZAC BABY CREAM are currently appearing in leading women's weekly and monthly magazines. News of the World, People, and a long list of Provincial Papers. Sales are certain. How are your stocks?



Retails at
1¹/6
(inc. Tax)
2/6
double
quantity



HOUGH, HOSEASON & CO. LTD. • ATLAS LABORATORIES • MANCHESTER, 1

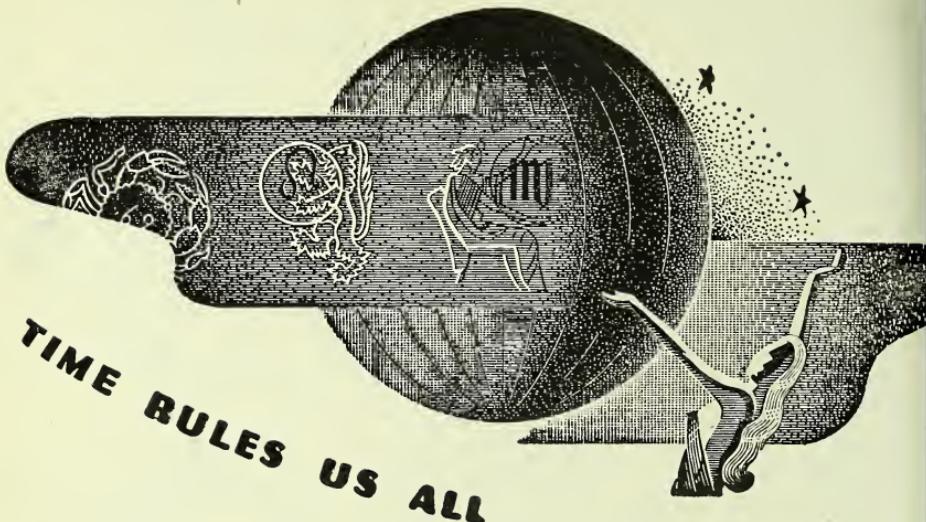


For over FIFTY years

The Wellcome Chemical Works have been producing chemicals of superlative quality. Many of these can now be supplied to other manufacturers on particularly advantageous terms. Long and extensive experience in the field of chemical manufacture places us in an exceptional position to meet the needs of individual customers. Inquiries should be made to Burroughs Wellcome & Co. at the address below.



'B.W.&CO.' *Fine Chemicals*



... but for customers who depend on insulin to control carbohydrate metabolism it assumes an even greater significance.

In the selection of the type of insulin, speed of action and duration of effect are all-important factors. There are forms of A.B. brand of insulin to meet all requirements.

INSULIN A.B. : The original unmodified type. Immediately effective but relatively short-lived.

5 and 10 c.c. vials (20, 40 and 80 units per c.c.)

GLOBIN INSULIN (with Zinc) A.B. : A combination of insulin and globin which has a slower and more prolonged action than Insulin A.B.

5 c.c. vials (40 and 80 units per c.c.)

PROTAMINE ZINC INSULIN A.B. : A suspension of insulin precipitated by protamine which is absorbed slowly, thus delaying the initial action and prolonging the effect for 24 hours and upwards.

5 c.c. vials (40 and 80 units per c.c.)	10 c.c. vials (40 units per c.c.)
---	-----------------------------------



Insulin A.B.

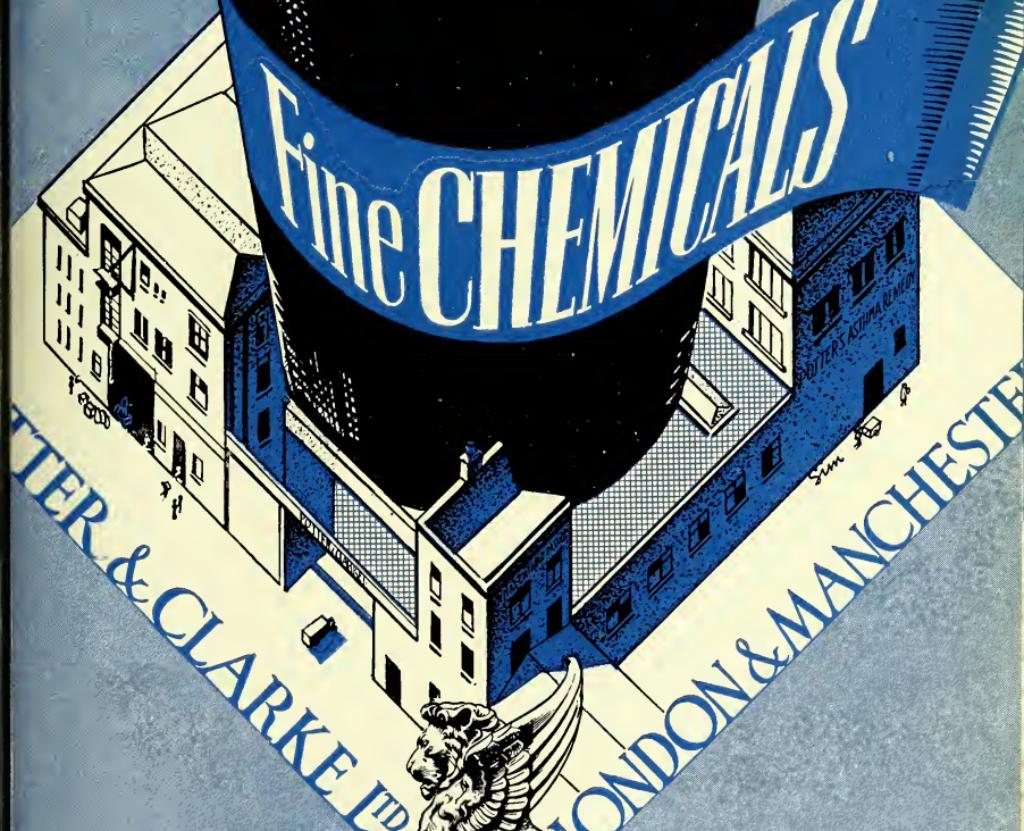
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LONDON & MANCHESTER





In display outers, packed in half dozens. A safe and reliable remedy known the whole world over... backed by Press Advertising on a big scale.

P.A.T.A. Retail 1/9 per Box
Wholesale 11/- per Doz.
Plus 3/8 tax

1950 BONUS TERMS

(for window display)

6 dozen - less 5%
12 dozen - less 7½%

**Potter's
CATARRH PASTILLES & ASTHMA REMEDY**

Price 2/5 per Tin
(inc. tax)

Wholesale 18/- per doz.
(plus 6/- per doz. tax)

Packed in half dozens

Well advertised and world famous.
A sound selling line for every
Chemist.



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A preparation from which the bitter principle is completely eliminated and replaced with pleasant tasting aromatics
... The perfect Laxative.

2 oz. Amber Round, retail 3/-
(inc. P. Tax)

Under 3 doz. - - - 18/- per doz.

3 doz. and under 6 doz. 17/6 per doz.

6 doz. and over - - 17/3 per doz.

Purchase Tax 33½%

5 oz. Amber Round, retail 6/-
(inc. P. Tax)

Under 3 doz. - - - 36/- per doz.

3 doz. and under 6 doz. 35/6 per doz.

6 doz. and over - - 35/3 per doz.

Purchase Tax 33½%



80 oz. bottles (for dispensing purposes)
Retail 1/- per oz. 36/- per bottle



Potter's N.S.D. TONIC

For the Nerves, Stomach
and Digestion

Under 3 doz. - - - 15/- per doz.

3 doz. and under 6 doz. 14/9 per doz.

6 doz. and over - - 14/6 per doz.

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2/6 Per Bottle. Including P. Tax

OUR GALENICALS HAVE STOOD THE TEST OF TIME
LIQUID EXTRACTS—TINCTURES—INFUSIONS—DECOCTIONS
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YEARS OF EXPERIENCE AND STRICT LABORATORY
CONTROL HAVE PRODUCED A HIGH STANDARD IN
WHICH THE TRADE CAN HAVE COMPLETE CONFIDENCE

Potter's
GALENICALS



IN BULK OR PACKED



Potter's PILLS TABLETS Lozenges

AMPOULES, CAPSULES, CACHOUS, SUPPOSITORIES,
PASTILLES, PESSARIES, ETC.—Our unrivalled equipment,
coupled with trained technical staff, enable us to manufacture
large or small quantities, standard or private formulæ,
under laboratory control to the highest pharmaceutical
requirements.



Potter's TYRO-LOL GERMICIDE and SOFT SOAP

SAPO MOLLIS B.P. VIRID.
SAPO MOLLIS B.P.
SAPO MOLLIS COMMERCIAL

TYRO-LOL GERMICIDE

Three times stronger than Carbolic Acid. Non-poisonous and non-irritating

Particulars and Prices of these and similar preparations on request

Potter's HADDIT

HOUSEHOLD INSECTICIDE
SPRAY & DUSTING POWDER

FREE OF PURCHASE TAX



SPRAY

A combination of "D.D.T." with its killing power of prolonged duration and Pyrethrum with its immediate action, in Hydrocarbon Oils

10 oz. bottles :
1 doz. 18/- 3 doz. 17/9 6 doz. and over 17/6 1 Gallon (free tins)
16/6 each net 3 doz. 16/- each
6 doz. 15/6 each

DUSTING POWDER

A "D.D.T." Preparation for household and horticultural use. Packed in Sprinkler Containers.

1/- size 4 oz. 1 doz. 8/- 3 doz. 7/10
6 doz. and over 7/8

2/- size 12 ozs. 1 doz. 14/6 3 doz. 14/3
6 doz. and over 14/-

Potter's SLIPPERY ELM FOOD

nourishing food of high dietetic standard, containing the ground inner bark of *Ulmus fulva*. It makes an excellent body building food for bottle fed children, and a valuable food for invalids.

TWO SIZES. P.A.T.A.

½ lb. tins Retail 2/6 — 23/- doz.

1 lb. tins Retail 4/6 — 42/- doz.

No Purchase Tax



Thompson's DANDELION COFFEE

Packed in hermetically sealed tins, thus retaining all the natural aroma of Dandelion Coffee.

½ lb. Retail 2/6 — 24/- doz.

1 lb. Retail 4/4½ — 42/- doz.

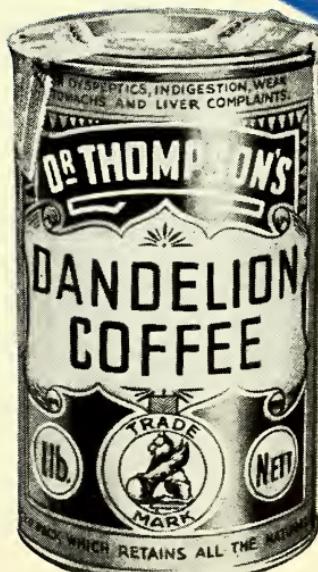
No Purchase Tax

Dandelion Coffee Essence:

1/- bottles — 9/6 doz.

1/6½ bottles — 14/6 doz.

No Purchase Tax



Established in the year 1812

POTTER'S



SOAPS · GALENICALS · GERMICIDES
HERBS · ROOTS and BARKS · IODIDES
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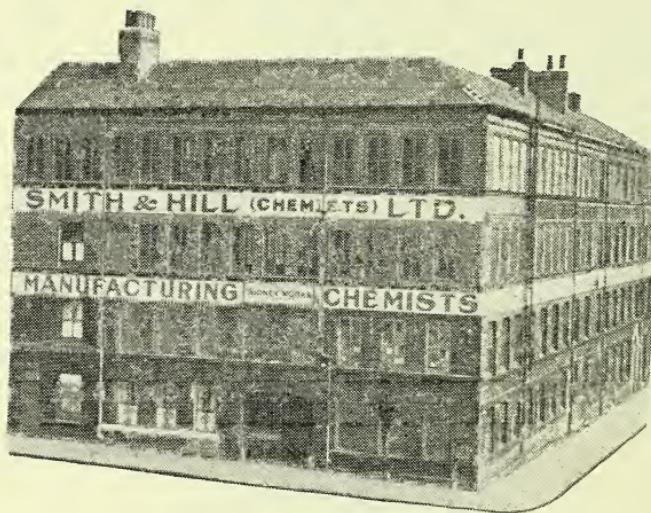
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- DRUGS & GALENICALS
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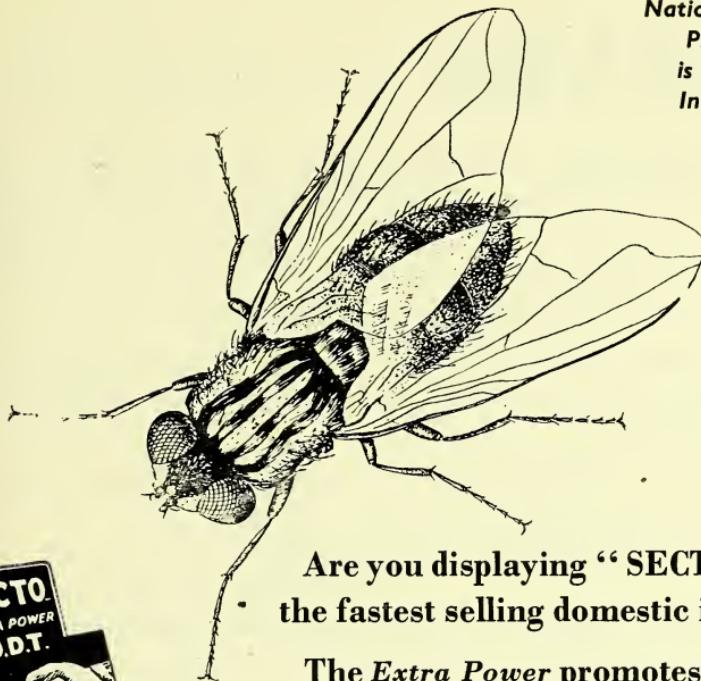
in the provinces.

Our regular deliveries to South Yorkshire, Nottinghamshire, and Derbyshire, offer an unsurpassed service to pharmacists in this area.

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The *Extra Power* promotes extra sales.

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EXTRA POWER.

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— A NEW PRODUCT FOR THE RELIEF OF HYPERTENSION

This new hypotensive agent combines Mannitol Hexanitrate (8 mgm.) with Viscum Album (50 mgm.) in one tablet.

It effectively relieves Hypertension, and controls subjective symptoms which frequently accompany HIGH BLOOD PRESSURE.

Dosage : Two tablets three or four times daily.

Supplied in bottles of 50 and 250 tablets

Tax-free Dispensing Packs of 500 tablets

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The **Chemix**

CHEMICAL MIXER

Designed for use in laboratories where the perfect mixing of pastes and liquids is essential.

Powerful enough to mix quantities up to 5 gallons.

Can be adapted for use with bottles, beakers, jars or basins.

All parts in contact with ingredients, are made of stainless steel.

Motor A.C. 240 volts. $\frac{1}{8}$ H.P.

Variable speed, between 150 and 2,000 revs. per min.

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Highest standard of purity



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It Sells on Sight



E LASTO advertising is widespread and consistent. An ever increasing demand for this product is being created at your very door. Are you taking full advantage of this opportunity for new business created in your area by this vigorous campaign? 'Elasto' sales-aids displayed in your window or on your counter will convert the 'prospect' we have created into a customer for you. And remember repeats and recommendations come freely from initial sales of 'Elasto'.

'ELASTO'

CECIL HOUSE · HOLBORN VIADUCT · LONDON

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Tablets are now being widely prescribed, and sell well over the counter, too.

- This Pink tablet is an A.P.C. Calc—Phos base with Phenolphthalein preparation.
- It can be sold with confidence for Headaches, Colds, Rheumatic and similar symptoms.
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● Ribena is still a priority product. By Ministry of Food order children, expectant and nursing mothers, and special classes on prescription *must* have first claim on supplies.

● *BUT*, thanks to Ministry help, these supplies are very much easier, and it is now permissible to widen distribution. There are many people who are in considerable need of the natural vitamin C which Ribena provides, and there's enough Ribena now for all of these to get a fair share.



Ribena
BLACKCURRANT SYRUP

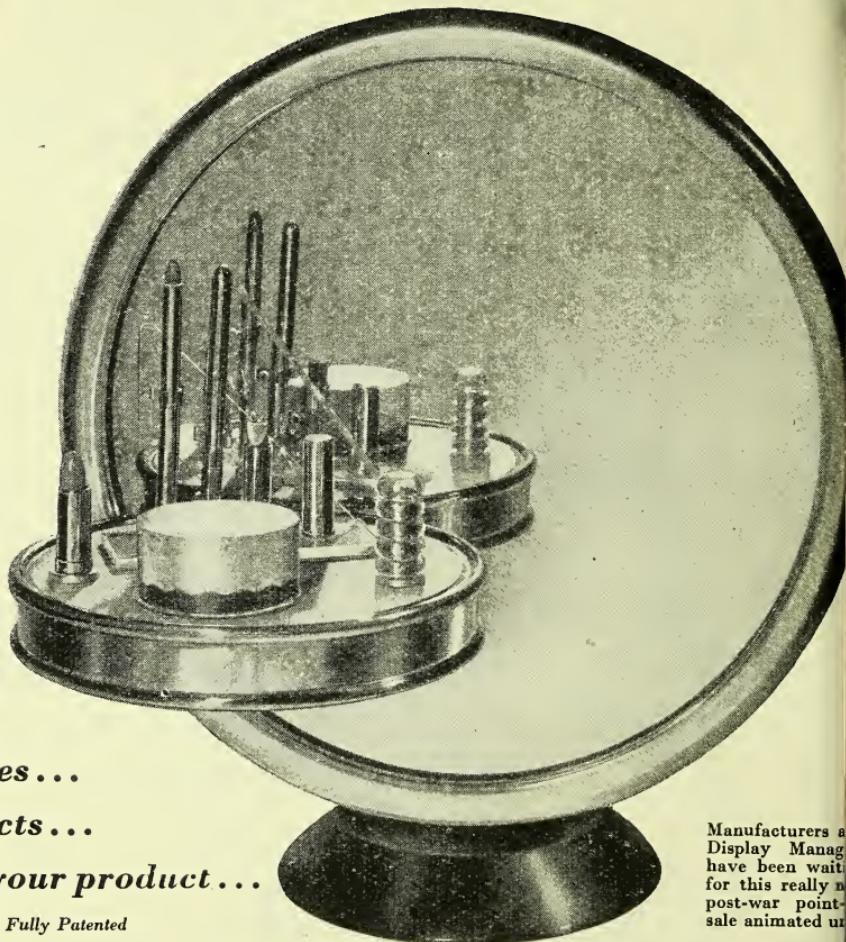
(particularly rich in natural vitamin C)

In any difficulty about supplies, write to C. Massingham, Supplies Director.

H. W. CARTER & CO. LTD., THE ROYAL FOREST FACTORY, COLEFORD, GLOS.

The 'MAGIC MIRROR'

. . . an animated unit that mystifies and magnifies your sale



It rotates . . .

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The Belfor Magic Mirror will make your display colourful, alive, outstanding above your competitor, and is a permanent salesforce in itself, deserving a place of honour in your shop window.

The displayed object is shown, by the unit, from all angles when it turns around its own axis, and the mirror reflects it in successive phases.

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A complete service for the chemist and pharmaceutical wholesaler.

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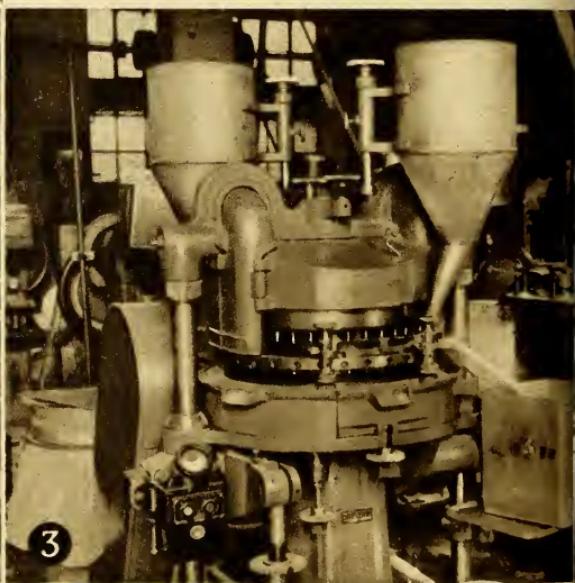
EAST HAM, LONDON, E.6



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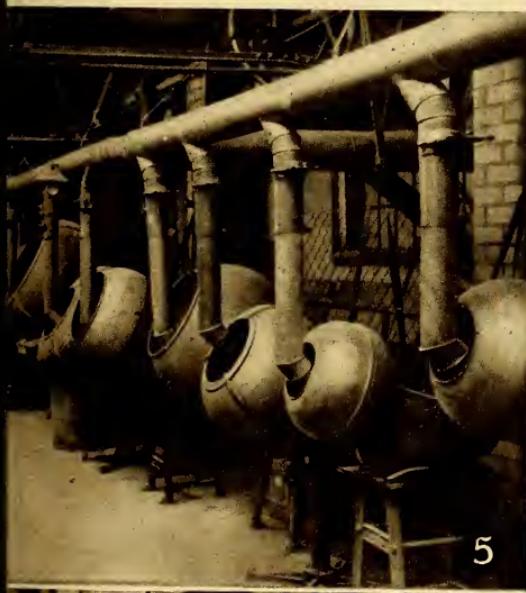
1. Part of one of the "packed-goods" departments.
2. Parts of "wets" department. Filling, labelling and finishing of individual liquid pharmaceutical preparations.
3. One of our battery of tablet machines. This Manesty 33-punch variable machine has a maximum output of 1,750 tablets per minute.
4. Part of "dry" floor. "Putting up," labelling, wrapping, etc.

The illustrations show just a few of the sections of the extensive plant, laboratories, packing and dispatch departments. The important export department is not shown here, nor are such specialised plants as the Chloral Hydrate manufacturing (one of the largest in existence).

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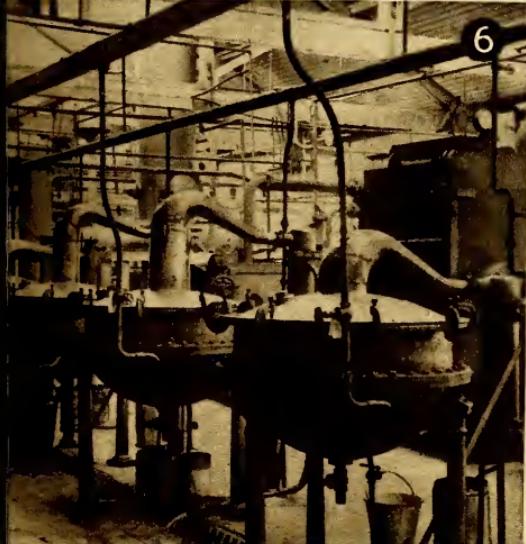
TABLETS AND PILLS. We are well placed to meet any requirements, however large, or for small private formulae. Place yourselves in our hands, you will be all satisfied.



5



8



6

5. A battery of coating pans. One pan shown here can cope with three-quarter million 2-grain tablets at a single charge.
6. Part of distillation section of pharmaceutical laboratory.
7. Section of dispensing laboratory.
8. Tablet counting and filling machine.

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per bottle	50	3/-	25/3 doz.	8½d.
"	100	5/-	42/- "	1½
"	200	9½	79/10 "	2/3
per tin	500	22/6	15/9 each	5/3
"	1000	42/-	29/5 "	9/10
SYRUP				
per bottle	4 oz.	3/6	29/5 doz.	10d.
"	16 oz.	12/-	100/10 "	2/10
per tin	1 gall.	100/-	70/- each	23/4
POWDER				
per bottle	1 oz.	4/-	33/8 doz.	11½d.
per tin	4 oz.	12/-	100/10 "	2/10
DUSTING POWDER				
Dredger (replenishable, with sprinkler top)		1/6	10/6 "	3½d.
per tin	16 oz.	4/6	37/10 "	1/1
SNUFF				
pocket size		1/-	8/5 "	3d.
refill for above		6d.	4/3 "	1½d.
per tin	4 oz.	4/-	33/8 "	11½d.
"	8 oz.	7/-	58/10 "	1/8
"	16 oz.	12/6	105/- "	2/11
INSUFFLATOR				
Filled, to reach upper nasal passages		3/6	29/5 "	10d.
TOOTH PASTE				
per tube		1/3	9/- "	3d.
MOUTH WASH				
per bottle	2 oz.	2/6	18/- "	6d.
"	6 oz.	7/-	50/- "	1/5
"	16 oz.	16/6	120/- "	3/4
PASTILLES				
per tin	2 oz.	1/4	11/6 "	4d.
PESSARIES				
(carton 12)		4/-	33/8 "	11½d.
OINTMENT				
per tube		10½d.	6/6 "	2½d.
per tin 1 lb.		8/-	67/3 "	1/10½
PARAFFIN				
per bottle	4 oz.	1/6	12/7 "	4½d.
"	8 oz.	2/6	21/- "	7d.
SYRUP OF FIGS				
per bottle	4 oz.	1/6	10/6 "	3½d.
ANTISEPTIC SOLUTION				
2 oz.	1/3	10/6 "	3½d.	
4 oz.	2/-	16/10 "	6d.	
16 oz.	5/6	46/2 "	1/3½	

Distributing Agents:

THE ANGLO-FRENCH DRUG CO., LTD.
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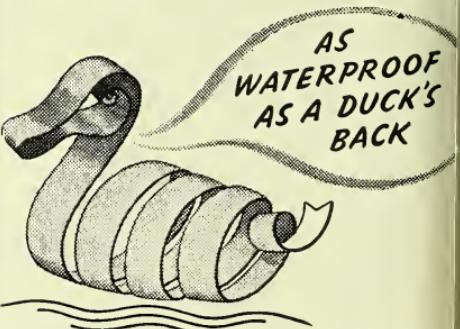
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Dimol Laboratories, Ltd.
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TRADE MARK

PLASTIC ADHESIVE STRAPPING



- 'SLEEK' PLASTIC ADHESIVE STRAPPING is completely waterproof
- Its smooth, sleek surface resists dirt and germs. Stains can be washed off its surface easily.
- As it cannot fray, 'Sleek' stays neat and clean for days at a time.
- It is strong and extensible.
- Being very pliable it readily moulds itself to contours of joints.

'Sleek' is regularly advertised to the medical profession, veterinary surgeons, factories and industrial concerns.

Flesh colour only
1" x 5 yd. spools **Retail price 2/-**
1" x 2½ yd. " " " 1/3

'SLEEK' SALES MANUAL

All that you and your staff will want to know about 'Sleek' is in this handy booklet. Copies free on request, or from our representative.

Attractive showcards are also available.

Herts Pharmaceuticals Ltd., Welwyn Gdn. City, Herts
Telephone: Welwyn Garden 3333



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PENICILLIN *Gelatros*

IN MOUTH AND THROAT INFECTIONS

now widely prescribed

INTENSIVE propaganda to the Medical Profession has resulted in greatly increased prescribing of *Penicillin Gelatros*, stable gelatin-base pastilles each containing 500 I.U. Penicillin.

The size and shape of Penicillin Gelatros enable them to be placed and retained in the buccal sulcus and there is no tendency to crush or swallow the pastille. They are efficient, convenient, and stable, and their use does not appear to be associated with complications such as sore tongue, stomatitis and "black tongue."

Penicillin Gelatros retain full potency for at least one year when stored at room temperature.

Detailed literature sent on request. Available in vials of 12 pastilles. Retail price 2/-.



PENICILLIN

Gelatros

gelatin-base penicillin pastilles

Orders and enquiries for Gade Laboratories products should be sent to the Sole Selling Agents : J. C. Eno Limited, Watford, Herts. (Watford 7761).

GADE LABORATORIES LTD., WATFORD, HERTS



Another best-seller in the C.G. range

“ADAPTOPRUF”

WATERPROOF

FIRST AID DRESSINGS

TRADE

8/4 dozen

Germproof - Dirtproof

RETAIL

1/- per tin

Oilproof - Washable - Frayproof

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in the manufacture
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BULK TABLETS, including NF lines, supplied
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in bulk.

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Watford

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MORSON BROMIDES being manufactured under modern conditions and in the most up-to-date plant, comply with the most exacting standard of purity, and will satisfy the requirements of every Pharmacopœia. In medical and pharmaceutical practice the bromides are in universal use to alleviate pain, promote sleep, and to allay general nervous excitation.

MORSON BROMIDES also find extensive uses in photographic emulsions, bromide papers, process engraving and lithography.



FACTORY.
SUMMERFIELD CHEMICAL
WORKS,
PONDERS END, MIDDLESEX

Thomas Morson & SON LTD.
ESTABLISHED 1821

Fine Chemical Manufacturers
47 GRAY'S INN ROAD, LONDON, W.C.1.
CABLES, ACONITINE, HOLB. LONDON.

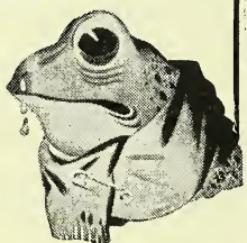
PARKINSONS PILLS PUT ME RIGHT!



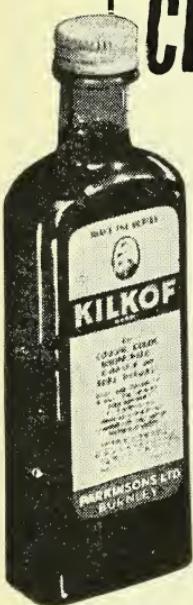
... and fast selling Parkinsons Pills can help put you right too! Retailing at 3½d. 7d. and 1½ a bottle, this famous laxative is backed by forceful nation-wide advertising.



CROAKY?



get yourself a bottle of
KILKOF



You get a bigger percentage of profit on Kilkof than on any other top-selling cough mixture today. A dozen bottles of Kilkof cost you 10/3d.; you retail them at 1/6d. a bottle; while nationally advertised "Croaky" is building up more and more demand.

*Famous names
from a famous House*

PARKINSONS

MANUFACTURING CHEMISTS • BURNLEY

BEAR BRAND HONEY



*For
Purity
and Quality*

As direct importers from all the main Honey-producing Countries of the World, we can supply Standard Grades of the finest Honey for all Manufacturing purposes.

Supplied in 7-lb. and 56-lb. tins and in barrels
L. GARVIN & CO. LTD.
ISLEWORTH, MIDDLESEX
Telephone: HOUNslow 3483 (3 lines)

Evan Williams

SHAMPOOS

CAMOMILE 6d. HENNA
for Fair Hair inc. tax for Dark Hair

Pure Soap Shampoos that have been the choice of discerning women for over 50 years.

Evan Williams

TONING PACKS *

**HENNA and 1/9½ GRADUATED
CAMOMILE inc. tax HENNA**

For reviving dull and faded fair hair.

For restoring colour and vitality to all shades of faded brown hair.

* **N.B.** This is the new name for our well-known Application Shampoos. The preparations are identical but the new title is more descriptive.

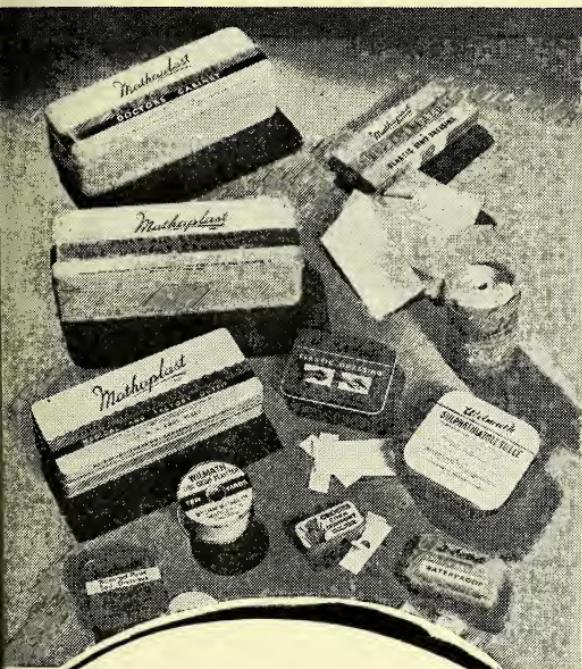
Mathaplast
REGD.

AND

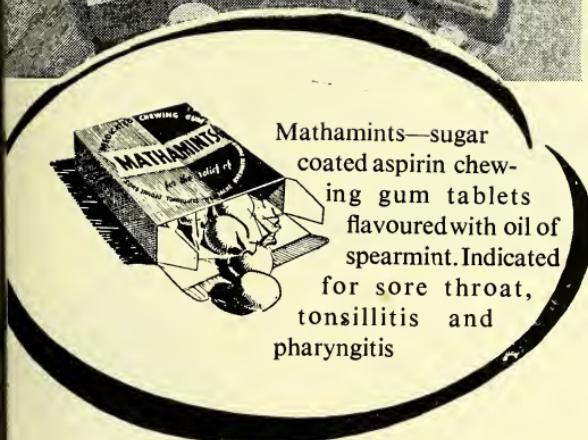
Wilmath
REGD.

SELF ADHESIVE PLAISTERS, DRESSINGS, BANDAGES

Packed in attractive, modern, ethically designed containers.



Mathamints—sugar coated aspirin chewing gum tablets flavoured with oil of spearmint. Indicated for sore throat, tonsillitis and pharyngitis



Literature and further particulars available from :

WILLIAM MATHER LIMITED
DYER STREET, MANCHESTER 15

(Plaster makers since 1826)

Mathaplast Elastic Adhesive First-Aid Dressings. Medicated centres impregnated with 5-Aminoacridine hydrochloride. Packed in convenient pocket size tins.

Mathaplast Doctors' Cabinet, containing an assortment of Mathaplast Elastic Adhesive First-Aid Dressings. Refills also available.

Mathaplast Surgery Cabinet, containing 1 yd. each of the 1½", 2½" and 3" sizes of Mathaplast Elastic Adhesive Strip Dressing.

Mathaplast Waterproof First-Aid Dressings. Plastic films with medicated lint centres impregnated with 5-Aminoacridine hydrochloride. Washable, oilproof and completely waterproof. In convenient pocket size metal containers.

Mathaplast Medical and Factory Outfit, containing an assortment of Mathaplast Waterproof Dressings, in 5 popular sizes.

Mathaplast Waterproof Boil Dressings, packed in tins each containing 3 Dressings—2 Drawing and 1 Healing.

Mathaplast Sulphathiazole Elastic Strip Dressing. Surgical gauze impregnated with a solution containing 5 per cent. sulphathiazole and stained with brilliant green. on elastic adhesive plaster. Available in 1 yard lengths and in widths of 3", 2½" and 1½".

Wilmath Zinc Oxide Self-Adhesive Plaster. Supplied on white or flesh coloured cloth.

Wilmath Crocus Corn Comfort. Self-Adhesive Corn Straps complete with protective rings.

Wilmath Sulphathiazole Tulle. A wide mesh tulle impregnated with sulphathiazole, 5 per cent., in a paraffin jelly base. Packed in tins containing 36 dressings, each 3½" x 3½".

Buying Sunglasses?

DEVALUATION-means-REVALUATION

... Customers value your discretion so ...
before stocking up, please ask your wholesaler
to show you our 1950 range — new models,
keen prices. Over 15 styles from which to choose,
retailing from 9d. with our popular L.2 model
“Sunrex” with *glass lens* at 1/9. individually boxed !!

Buy BRITISH this Season

SUNRA GLASS

AT LAST!

A moderately priced sunglass with the "expensive" look

RETAILS AT
3s. 6d.
(in two colour box)

Scientifically styled for men and women. Comfortable saddle bridge in two popular fittings.
Available in attractive colours: opaque, transparent and pearl, from your usual wholesaler. There are twelve other models of sunspecs from which to choose which retail from 1s. Od.

370-372 STATION ROAD, FOREST GATE,
LONDON, E.7. — ENGLAND

Telephones: MARlboro 1766 & 1550

OPTICAL PRODUCTS LTD.

LAST SEASONS' SUNGLASS SENSATION
VALUE = SALES! SALES = PROFITS!



Make No Mistake—

The reason why so many women are asking for Silcot is that Silcot gives them the fullest comfort and safety.

With its cotton wool filling, its knitted covers, its stitched loops, Silcot meets the most exacting needs. So successfully does it meet these needs that time after time the demand is for Silcot and Silcot only.

Nationally Advertised

Are you helping to meet this demand?—a demand created not only by the quality of the towel itself but by consistent national advertising.

You will find Silcot a line which will satisfy your customers and make more customers. It will give you a constant turnover. Make no mistake—stock Silcot and help your towel sales.



The end section of the coloured bands of the Silcot towel pack. There is a different colour for each size—Yellow for size 0, Green for size 1, Lilac for size 2, Grey for size 3, Mauve for size 4, and Blue for Vensilla.



The above illustration is from our advertisement in the July women's magazines. These magazines have a circulation of over 9,000,000.

A LITTLE MORE COMFORT —AT NO EXTRA COST

To give your customers this extra comfort you must sell Vensilla Soluble Towels. They are easy to wear—easy to dispose of. Be sure and sell Vensilla with their soft covers, loops, and protective backing.

Vensilla
SOLUBLE TOWELS

SILCOT Sanitary Towels
SOFT . . . SAFE . . . SUPER!

MACDONALD & SON LTD.

HOPE MILLS, POLLARD STREET, MANCHESTER, 4 Ardwick 1561-2

BONUS OFFER

Now! NIVEA DISPLAY BONUS gives yo
12 TINS FREE!

You get 1 dozen Tins of the popular (368) size NIVEA CREME for a £3 minimum order of NIVEA PRODUCTS. Orders above £3 earn two more Free Tins for every extra 10/-.

★ Displa
NIVEA

Skin needs
NIVEA

★ Display
NIVEA
prominently.
Attractive
show material
available on
request. Order
ample supplies
of NIVEA now—
it will be in
GREAT
DEMAND !

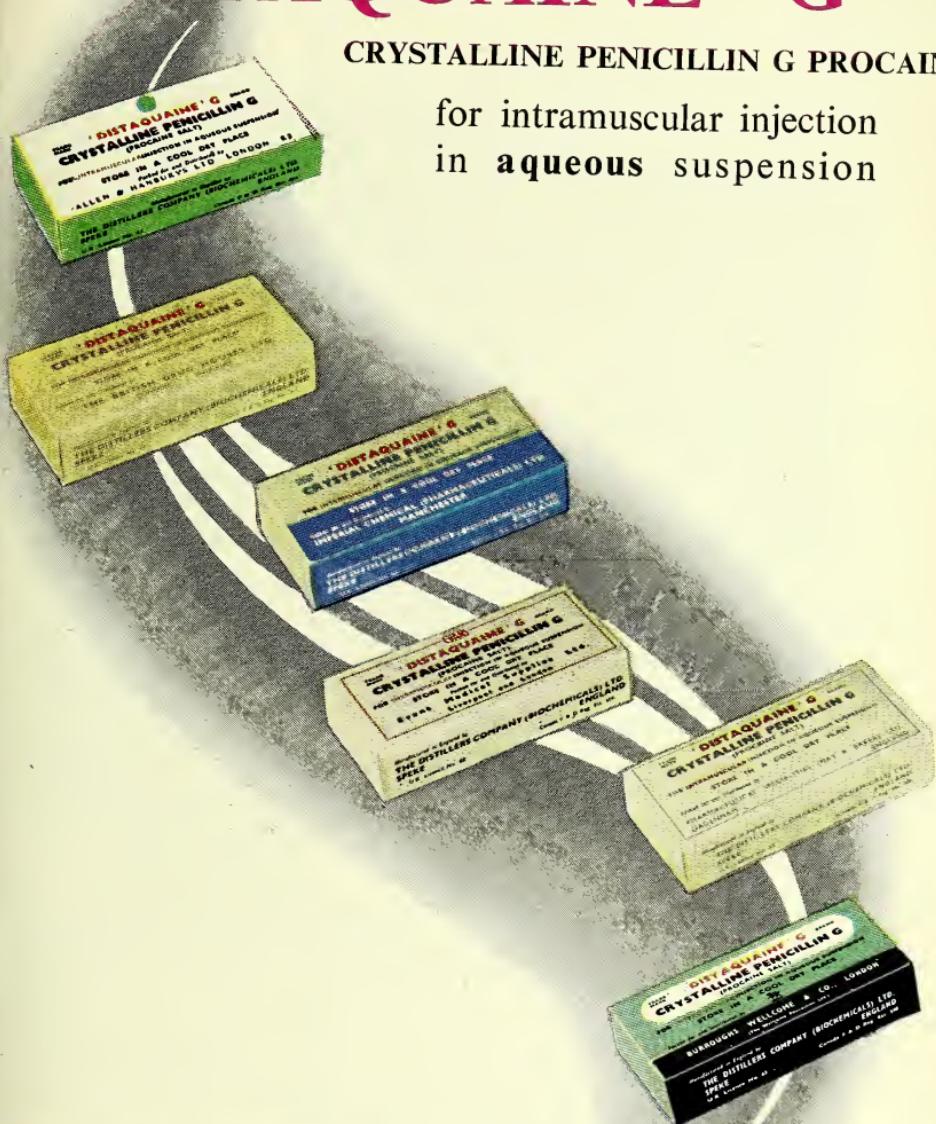
HERTS PHARMACEUTICALS LIMITED, WELWYN GARDEN CITY, HER

'DISTAQUAINE' G

brand

CRYSTALLINE PENICILLIN G PROCAINE

for intramuscular injection
in aqueous suspension



Manufactured by
**THE
DISTILLERS COMPANY
(BIOCHEMICALS) LIMITED**

SPEKE

LIVERPOOL

Cry halt TO SPENDING

A black and white photograph of a woman's head in profile, facing left. Her hair is styled in tight, voluminous waves. She is holding a white rectangular card in front of her chest with both hands. The card has the words "CURL YOUR HAIR" printed on it in a bold, sans-serif font. Below this, the word "with" is written in a smaller, cursive font, followed by the brand name "LORELOX" in large, yellow, outlined letters. At the bottom of the card, the slogan "COMPELS HAIR TO CURL AND STAY CURLED" is printed in a smaller, italicized font. To the right of the woman's head, there is a small glass bottle of Lorelox hair product with a blue cap. The bottle has a label that includes the brand name and some smaller text. Next to the bottle is a circular price tag with the text "PRICE PER BOTTLE" and the amount "2/7½".

SEND NOW
for one or more of these
attractive showcards

WER WHICH IS PASSING YOU BY

This striking showcard will turn demand for one of Britain's most popular proprietary lines

**sharp
night**

at your door

es of LORELOX are soaring to unprecedented heights. Large scale advertising and enthusiastic recommendation will keep the sales graph steadily rising. Undoubtedly the generally increased demand is reflected in your own locality. If you personally are not feeling the benefit in increased turnover the remedy may lie partly in your own hands. It is certain there is no doubt in customers' minds that you sell LORELOX. Send for this attractive showcard and display it prominently on your counter or, better

— in your window where it will attract the eye of the casual passer-by. At the same time make sure that your stocks of LORELOX are adequate to a likely demand.

For curling Baby's hair

Toddilox 2½ Per Bottle
Retail

Maureen Baum Ltd, Bury, Lancs

Remember—
hundreds in your district
buy their other
chemist's sundries
where they buy
their LORELOX

DISPLAY ENO

- it's a sales-winning show!



FREE WINDOW DISPLAY SERVICE for ENO GROUP PRODUCTS

Striking new window displays by ENO now feature ENO's "Fruit Salt" in its sales-winning pre-war wrapper, together with EFFALGEN, NEW-SKIN, C.P.10 (the new Already Spread poultice), and IRON JELLOIDS.

Please write for details to:

J. C. ENO LTD., WATFORD, HERTS

**FLIT SALES
ARE BOOMING!**



What with a bright new tin and a biggest-ever advertising campaign, FLIT sales are higher than ever before. Cash-in on Flit's best-selling year by ordering now. Don't forget that Flit's 1950 advertising campaign, will sell Flit for you right through the summer.

Here's the new tin for the world-famed FLIT.

**SAME POST-WAR POWER
—SAME PRE-WAR PRICE**



STOCK FLIT - WORLD'S NO.1 INSECTICIDE
for quick turnover and big profits

ENICO LIMITED, 128/132, ALBERT STREET, CAMDEN TOWN, N.W.1

NEW POWERFUL BACTERICIDE

BRADOSOL

(Rideal-Walker coefficient 450)

Non-irritant antiseptic for hospital and general use
Effective in low concentrations

**Wounds and burns Pre-operative hand and skin
disinfection Obstetrics and Gynaecology Urology
Dermatology Gargle and Mouthwash Disinfection
of instruments, utensils and linen Air disinfection**

Bradosol solutions are detergent and penetrate tissue surfaces, facilitating cleansing and the removal of grease

Bradosol is β -phenoxy-ethyl-dimethyl-dodecyl ammonium bromide, a quaternary ammonium compound. It is supplied as a pleasantly perfumed 5% aqueous solution ready for dilution.

Bottles of 2 fl. ozs. (3/-), 20 fl. ozs. (23/6) and 80 fl. ozs. (80/-).

Retail Discount 33 $\frac{1}{3}$ % ; Purchase Tax extra

Please apply for literature and sample

C I B A

(‘Bradosol’ is a registered trade mark)

CIBA LABORATORIES LTD • HORSHAM • SUSSEX

Telephone : Horsham 1234

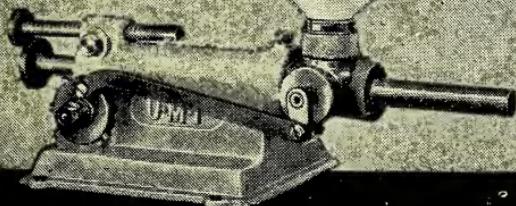
Telegrams : Cibalabs, Horsham

Use **U·M·P** COLLAPSIBLE METAL TUBES

and fill them by the **U·M·P**
COLLAPSIBLE TUBE FILLING UNIT

This unit consists of Tube Filling Machine, Tube Closing Machine and Tube Crimping Machine. Please write for particulars and descriptive leaflet.

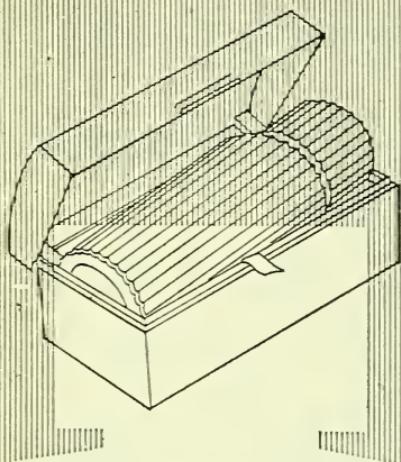
We are also moulders of PLASTICS to the Trade by injection and compression methods



THE SIGN OF SERVICE
AND CO-OPERATION

UNIVERSAL METAL PRODUCTS LTD.

SALFORD 6 LANCS. Telephone: PENDLETON 1631-2-3
LONDON OFFICE: ARGYLE HOUSE, 29/31 EUSTON ROAD, N.W.I.



TREASURE CHESTS OF PROFIT

'Treasure Chest'—Goya's latest Travel Size perfume pack . . . The last word in attractive design. Still the same price and size, but now the perfume is in a smart fluted bottle—snug in a beautiful ivory casket. Here's a wonderful opportunity to increase your perfume sales.

Beauty Editresses of the mass circulation women's magazines have given glowing accounts of Goya's new Travel Size perfume in their columns.

So stock up now with 'Treasure Chests' . . . give them prominent display . . . then watch your sales. Available in all the popular Goya fragrances.

TRADE PRICE 36/- PER DOZEN
RETAIL PRICE 7/6 EACH

Goya

161 NEW BOND STREET W1

Inecto
assures you
of
REPEAT SALES

THE GUARANTEED PERMANENT
HAIR COLOURING
18 NATURAL SHADES

IN TWO CONVENIENT SIZES

Trial-size Outfit, price 5s. wholesale (including 2s. 6d. purchase tax), retailing at 6s.

Full-size Outfit, price 14s. wholesale (including 7s. Od. purchase tax), retailing at 17s. 6d.

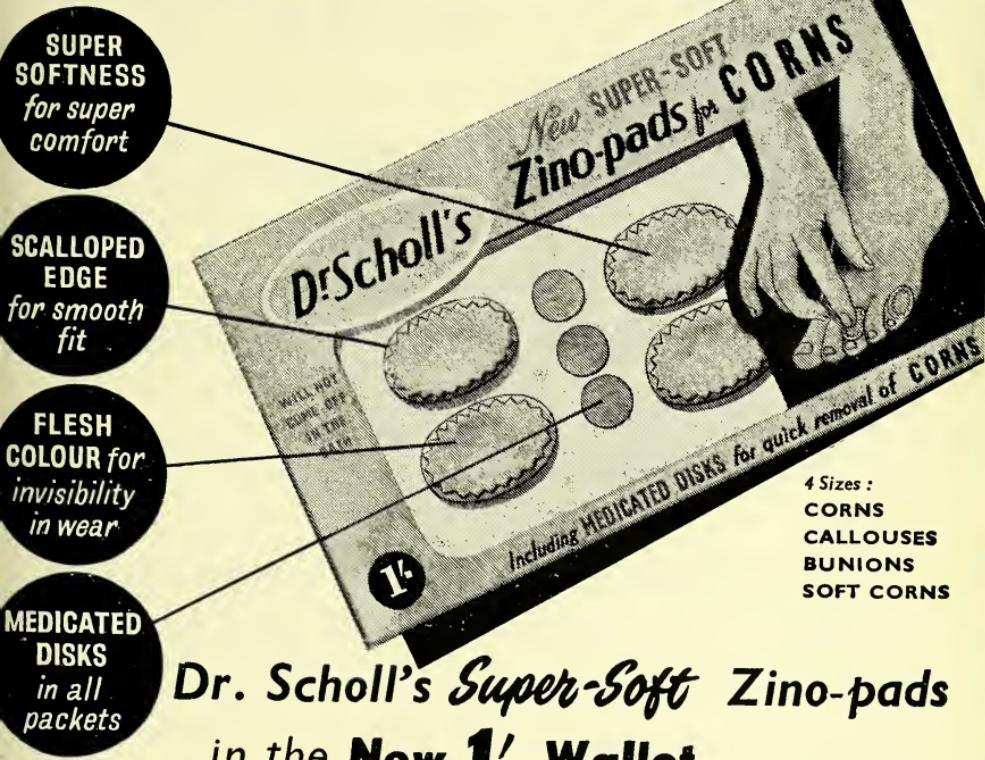
Available from all wholesale houses.

INECTO

Enquiry Bureau
27 DOVER STREET, LONDON, W.
Regent 7541 (10 lines)

They are selling AT SIGHT

in the New Window Wallet



Dr. Scholl's Super-Soft Zino-pads in the New 1/- Wallet

Chemists wanted this new pack—and it is proving a great success. Through its popular price and the Window Wallet a vast new popular market is being introduced to SCHOLL FOOT COMFORT. The unique downy softness and other features of Dr. Scholl's Super-Soft Zino-pads are visible to the customer. The instant foot relief and the big value are irresistible at one shilling.

TO SHOW IS TO SELL

An all-the-year-round appeal and the attractive Scholl terms justify a prominent show. Feature Foot Comfort in your pharmacy today! Send for the attractive Dr. Scholl display material.





A new Geigy Pharmaceutical preparation

Made by the originators
of DDT insecticides

Messrs. Walter Crowe Limited are our Selling Agents to the Trade and orders may be placed with their Representative at the time of his frequent and regular calls.

Orders sent by post and enquiries should
be addressed to

PHARMACEUTICAL LABORATORIES GEIGY LTD
NATIONAL BUILDINGS, PARSONAGE, MANCHESTER 3

Telephone - - - - Middleton (Manchester) 3933

Telegrams - - - - Geigypharm, Manchester

“STEROXIN” OINTMENT

for
INFECTED SKIN
AND WOUNDS



Tubes of 1 oz. Retail Price 3/8 (inc. tax)

Introductory Bonus Offer

38% PROFIT

ONE TUBE FREE with each dozen ordered

What this means to you :

	£ s. d.
You receive 13 x 1-oz. tubes selling at	1 19 0 (<i>plus tax</i>)
You pay for 12 tubes	1 4 0 (<i>plus tax</i>)
Your profit—38% of Selling Price	15 0

Purchase Tax of 8s. 8d. is payable on this parcel

You can confidently recommend Steroxin Ointment for :

Impetigo	Ulcers of various Types
Impetigoous and Myotic Eczema	Ulcerated Chilblains Whitlows
Barbers Rash	Fungus Diseases such as
Boils and Carbuncles	Athletes Foot

A CRODA

PRODUCT



SUPERFINE PRODUCTS FOR THE PHARMACIST

"Polychol" (Water-Soluble) Wool Wax Alcohols

"Hartolan" (Oil-Soluble) Wool Wax Alcohols

"Polawax" Non-Ionic Emulsifying Wax

"White Swan" Lanolin Anhydrous

"Crill" Surface Acting Agents

"Isocreme" Absorption Base | "Cremba" Absorption Base
Glyceryl Monostearate | "Kathro" Cholesterol

CRODA LIMITED

Administrative Offices : CRODA HOUSE • SNAITH • GOOLE • YORKS

Telephone • SNAITH 77 (three lines) ALSO AT LONDON • MANCHESTER • BRADFORD

NOW NATIONALLY ADVERTISED

For years there has been a big demand for this old-fashioned well-known remedy. Now that we have embarked on an extensive advertising campaign in the Press and women's publications the demand is greater than ever. Be sure you are well stocked—



Send in your order
now to:

O. SCRUTON & CO., LTD.
4 BARKER LANE, YORK

Display material
available on request.

VITAMIN B₁ D.C.L. YEAST TABLETS

Each ounce contains a natural Vitamin B potency equivalent to that of 25 mgm. Aneurin Hydrochloride, 1·4 mgm. of Riboflavin, and 8 mgm. Nicotinic Acid. Each tablet contains 100 I.U. (approx.) Vitamin B₁.
100 TABLETS 3/9d. 50 TABLETS 2/3d.

MANUFACTURED BY
THE DISTILLERS CO. LTD., EDINBURGH.



NICO SOAP

3/- KILLS 5/
GREENFLY and PLANT BUG

DAISYKIL

Selective Weedkiller for Lawns
1/- packet treats 720 sq. ft.

J. D. CAMPBELL, Lund St., Manchester, 1



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with pleasure
the asking*

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A.F.D.**Ethical Pharmaceutical Products**

REGULARLY PRESCRIBED BY THE MEDICAL PROFESSION

ACECOLEX

Trophic and antiseptic paste containing Acecloine

***ACECOLINE**

Stabilised Acetylcholine Hydrochloride in ampoules of 2, 5, 10 and 20 ctgs.

ADREPATINE

Suppositories and Ointment

***BACTE-PHAGES**

The therapeutic bacteriophages of Prof. d'Herelle

***BIVATOL**

Lipo soluble Bismuth

CRYOGENINE

(Lumière)

Phenyl Semicarbazide

***DI-CARDINE A.F.D.**

A combination of Digitoxin and Aminophylline in tablet form

ELIXIR-GABAIL

(Bromo-Valerianate)

Deodorised Valerianate with Chloral Hydrate and Strontium Bromide

EMGE

(Lumière)

Magnesium Hyposulphite

†HEPVISC

Tablets containing Mannitol Hexanitrate and Viscum Album, for relief of Hypertension

HYPOTENSYL

The active principles of Viscum (GUI) with Gland Extracts

IODAMELIS

(Logeais)

Combined Iodine and Hamamelidin

IODOBESIN

Tablets of pluriglandular total extracts with Iodalbumen

MYCOLACTINE

Tablets

Bile Extract, Yeast and Lactic Ferments

SALIODE

Iodine and Salol in olive oil for intramuscular injection

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Pure Tin and Tin Oxide in tablets

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Deodorised Valerenate with Expectorants Chloral Hydrate and Bromide

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TRINITRINE-CAFEINEE

(Dubois)

Soft centred pills for instant absorption

***TULLE GRAS**

(Lumière)

The original Tulle Gras for the treatment of burns

URASEPTINE

(Rogier)

Urinary antiseptic and antiarthritic containing Lithium, Piperazine, Hexamine, etc.

*Free of Purchase Tax in all packings

†Tax-free Dispensing Packs available

Further particulars and prices on request

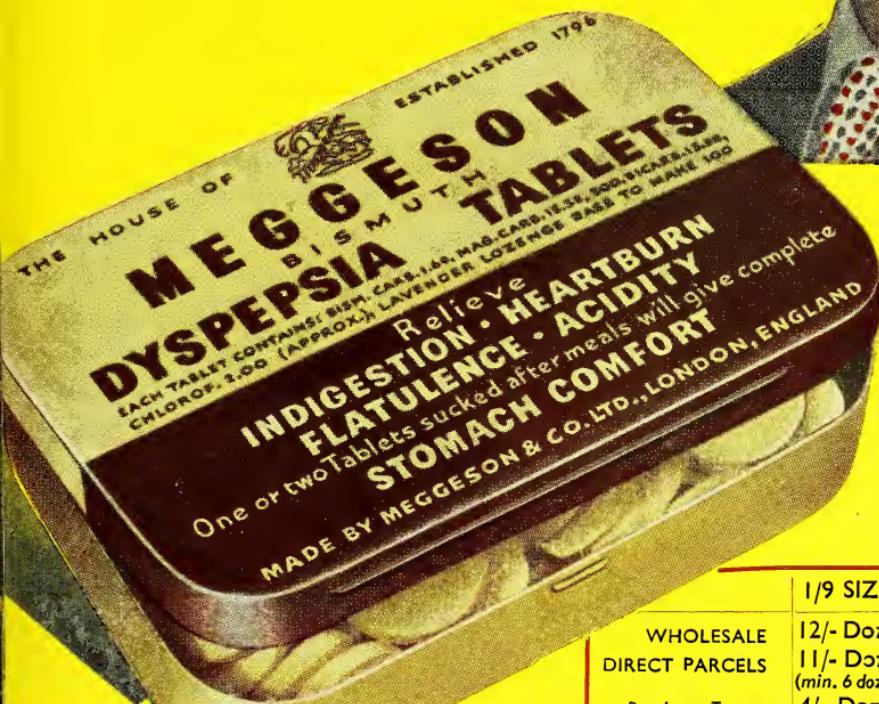
TELEPHONE: HOLBORN 6011

TELEGRAMS: AMPSALVAS LONDON

THE ANGLO-FRENCH DRUG CO., LTD.

11-12 GUILFORD STREET, LONDON, W.C.1

*can always
recommend
with confidence
product of the
HOUSE OF
MEGGESON*



	1/9 SIZE	4/6 SIZE
WHOLESALE	12/- Doz.	30/- Doz.
DIRECT PARCELS	11/- Doz. (min. 6 doz.)	28/- Doz. (min. 3 doz.)
Purchase Tax	4/- Doz.	10/- Doz.

RECOMMENDED

WITH CONFIDENCE

For

Throat

Comfort

AND PROTECTION AGAINST COUGHS
COLDS AND
CATARRH



THE FOREMOST PREPARATION FOR RELIEVING
THE MOST ACUTE CATARRHAL
CONDITIONS

MEGGEZONES

1/-
INCLUDING
PURCHASE TAX

CONTAIN

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0.3%; CHLORO 0.4%; BENZIN 0.2%;
LIQUORICE PASTILLE BASIS AD 100.

FOR
COUGHS
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MADE AND GUARANTEED BY MEGGESEN & CO., LTD.
FAMOUS SINCE 1796

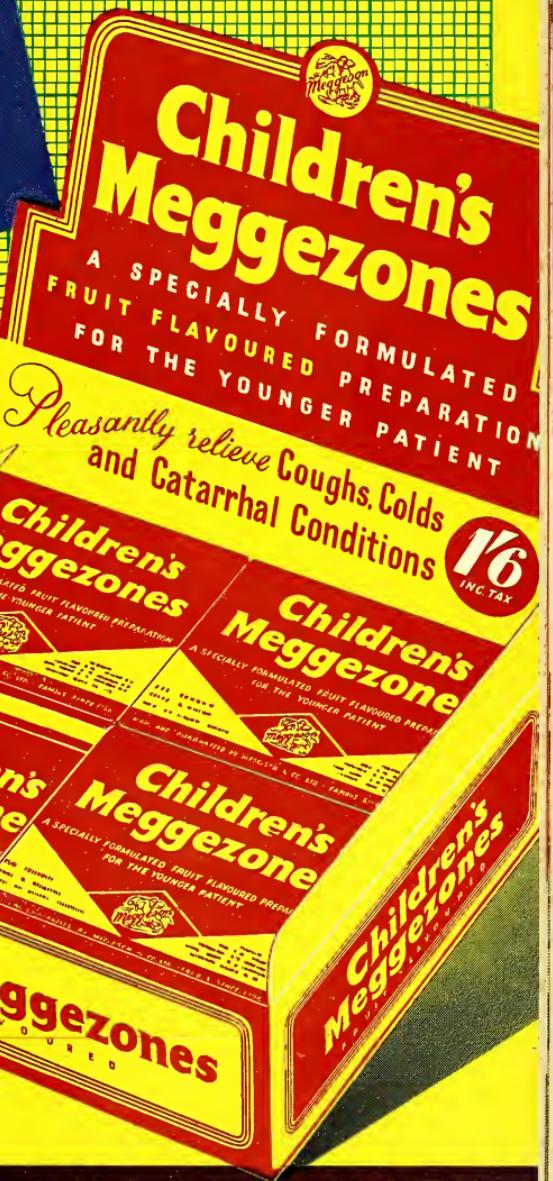
HYGENIC
ANTISEPTIC
GERMICIDAL
SOOTHING

WHOLESALE 12/- PER DOZE
DIRECT PARCELS (MINIMUM
6 DOZEN) 11/- PER DOZE
(Purchase Tax 4/- per dozen)

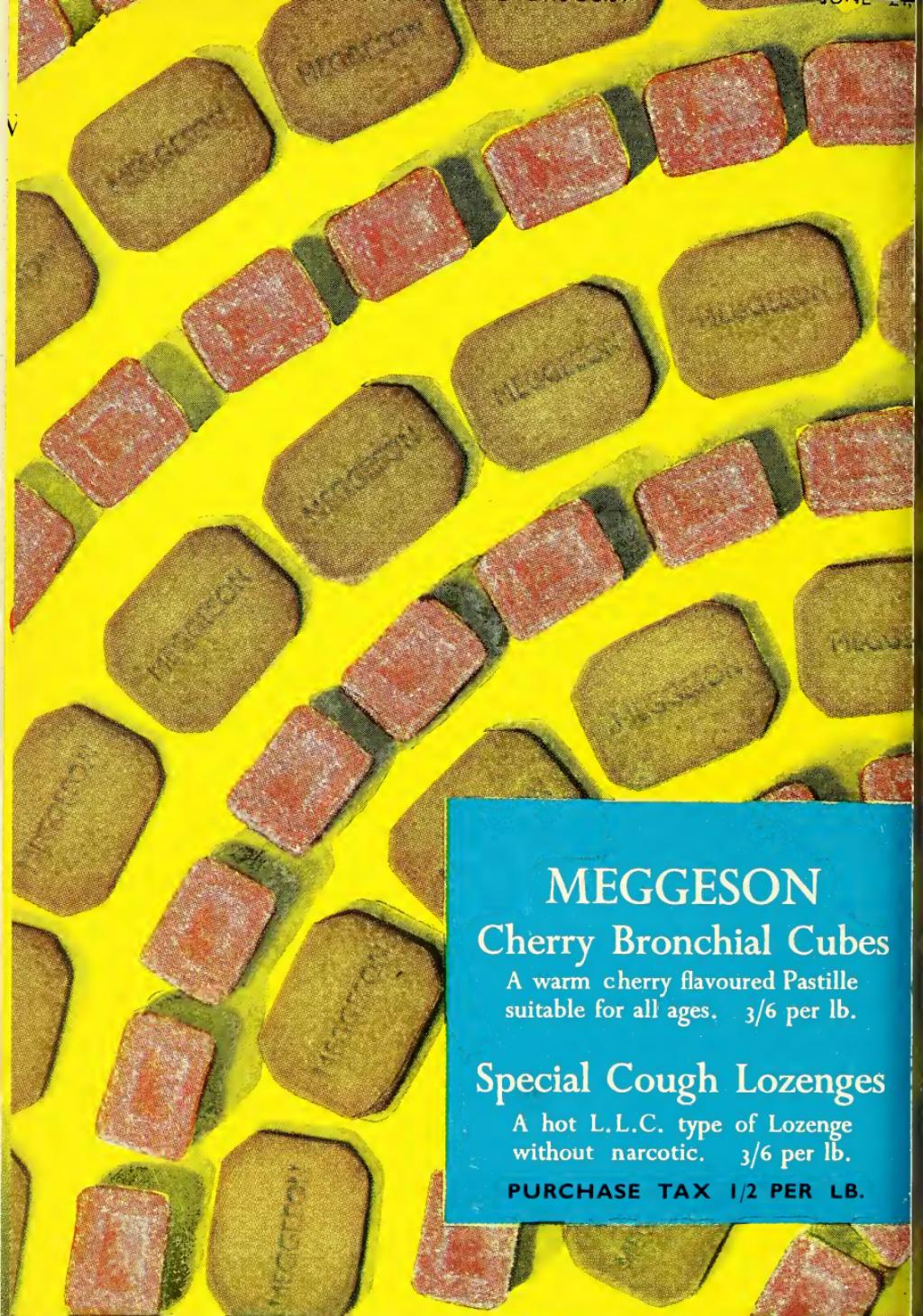
THE LEADER IN ITS FIELD

SALES OF CHILDREN'S MEGGEZONES

Are you getting
your share of
this expanding
market?



9/6 PER DOZEN
(less Tax 3/2 per dozen)



MEGGESON Cherry Bronchial Cubes

A warm cherry flavoured Pastille
suitable for all ages. 3/6 per lb.

Special Cough Lozenges

A hot L.L.C. type of Lozenge
without narcotic. 3/6 per lb.

PURCHASE TAX 1/2 PER LB.

THE LEADERS IN THEIR FIELD

MEGGESON & CO. LTD., LLEWELLYN STREET, LONDON, S.E.

TELEGRAMS: MEGGESON, SOUTHPARK, LONDON.

TELEPHONE: BERMONDSEY 1741 (3 lin)

Fresh facts from X-4711.  four-seven-eleven

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TOILETRIES FOR MEN

MADE IN ENGLAND

RETAIL PRICE (inc. tax)
Each P.A.T.A.

LATHERING SHAVING CREAM

BRUSHLESS SHAVING CREAM

BRILLIANTINE

HAIR CREAM

9723 Combined Brilliantine and Fixative 2/-

AFTER SHAVING LOTION

EAU DE COLOGNE Blue and Gold Label	RETAIL PRICE (Inc. tax) Each P.A.T.A.	PERFUMED EAU DE COLOGNES	RETAIL PRICE (Inc. tax) Each P.A.T.A.
12/1 Original Shape, in box	37/6	2805 TOSCA Fancy flat shape bottle	11/-
13/1 " "	27/6	2806 " " " " "	5/11
14/1 Square Shape	22/3	1207 " Pear shape	3/-
15/1 Original Shape	14/6	1605 RHINEGOLD Tall rectangular bottle	11/8
16/1 " "	7/8	1606 " rectangular bottle	6/7
43 Watch Shape	4/-	9915 LA BOHÈME Flat shape	14/6
		9916 " " "	7/10
		9943 " " "	4/2

Write for complete Price List and terms to

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METHYLENE DITANNIN

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PURE AND TECHNICAL

PYROGALLIC ACID

RESUBLIMED - PURE - TECHNICAL

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Manufactured by

J. L. ROSE, LTD.

ABBEY ROAD, BARKING, ESSEX

Telephone—
RIPPLEWAY, 2763

Telegrams—
"GALLIC, BARKING."

The answer to Summer Sore Throats



Simpkins ANTI-SEPTIC FRUIT (flavoured) PASTILLES

Summer sore throats are as sure to come as summer itself. Make certain that you are in a position to offer the public a sure and pleasant relief. Simpkins Antiseptic Fruit flavoured Sore Throat Pastilles are available in the following attractive packs:—

4-lb. decorated free tins

Cartons containing 24 1½-oz. cellophane packets retailing at 10½d.
= 6/- per dozen (plus Purchase Tax)

2-oz. tins packed in one dozen display outers retailing at 1/6d. each
= 9/9d. per dozen tins (plus Purchase Tax)

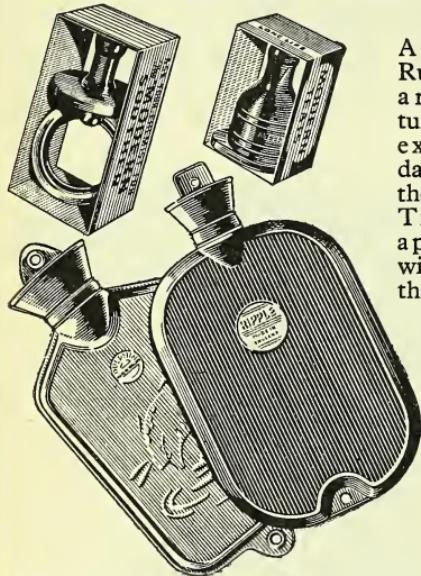
The heavy demand exceeds supplies so chemists will be wise to send their order without delay



Simpkins of Sheffield

Quality Goods

BY THE MAKERS OF "MODERN" TEATS



All Cannon Rubber products are manufactured to the most exacting standards. Wherever the CANNON Trade Mark appears, you will find the best that is to be had.



CANNON RUBBER MANUFACTURERS LIMITED

Makers of: "MODERN" AND "WELLBORN" TEATS, "DOLPHIN" AND "RIPPLE" HOT WATER BOTTLES AND "DIVER" AND "ROSETTE" BATHING CAPS.

(Available from your usual wholesaler)



THE ORIGINAL MEDICATED SNUFF

Proprietors

HEDGES (Chemists) LTD

OF DALE END, BIRMINGHAM

TRY THE FAMOUS



"**L.260**"
Medicated
SNUFF

The Snuff that made Snuff-taking popular!

Delightfully pungent & pleasantly aromatic

1/5 per box



OBtainable from Wholesalers or Direct from Manufacturers

RETAIL PRICES—

1/5, 2/10, 5/1

WHOLESALE PRICES—

14/6, 29/6, 54/6

TRY A DOZEN DISPLAY BOX AND WATCH FOR RESULTS

It is necessary to have a Tobacco Licence to sell this preparation.

NURONA

SUNBRONZE CREAM and SUNTAN CREAM

are now freed from restriction of supplies and are

Available in any quantity

Made to a formula originally designed for sun-
ay practitioners, the efficiency of Nurona Sun
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The Sunbronze Cream is a development of the
Sun Tan Cream, combined with a vanishing
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tremely popular because of its handiness for
pocket or handbag.

Nurona prevents or relieves painful sunburn
and assists rapid tanning.

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SUNTAN CREAM (in bottles)	... 1/10 and 3/- inc. Tax
SUNBRONZE CREAM (in tubes)	... 1/10 inc. Tax
White or Tinted	

AMES WOOLLEY, SONS & CO. LTD.
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WN42

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Hampton Chemical Works

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'CRUSADE BRAND' Glycerine, Lemon, Honey and Ipecacuanha (with Glucos Bronchial Cough Balsam. Children's Cough Syrup. Vapour Rub Menthol and Wintergreen Cream. Zinc and Castor Oil Cream Alexandrian Senna Pods.

'NEM CON' Surgical Germicides Nos. 1 and 2 (Non-Caustic and Non-Poisonous). Lysol. Caustic Soda. Sulphur Candles. Lavatory Cleanser.

PACKED MEDICALS:—We can offer to advantage a full range with attractive and distinctively designed Labels.

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OVALTINE MANUFACTURERS TO H.M. THE KING

Quality Products *from the* House of Wander

In order to maintain the general excellence of Wander preparations, effort is not spared to apply systematically the latest discoveries of scientific research. Raw materials have been selected, manufacturing processes devised, and scientific control applied all with the same object in view. The 'Ovaltine' Research Laboratories where Wander products are constantly under active investigation and development, are amongst the best of their kind, and are staffed by fully qualified scientists.

The 'Ovaltine' Factory in a Country Garden, the 'Ovaltine' Dairy Farm with its famous herd of Prize-winning Jersey cows, and the 'Ovaltine' Egg Farm are all evidence of the policy of excellence which animates the House of Wander.

*The following are a few of the many well-known
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The world's most popular food beverage for health and vitality. Because of its exceptional nutritive value and ease of digestibility 'Ovaltine' is the food beverage most widely used in Hospitals and Nursing Homes. It is invaluable in cases of difficult feeding.

OVALTINE RUSKS

Delicious, digestible and nourishing. Prepared from the finest ingredients, including a proportion of 'Ovaltine'. They are a great aid and comfort to infants at teething time.

OVALTINE CHUCKLES

The ideal first solid food for infants, supplementing the usual milk diet with vitamins and minerals needed for their growth and well-being. Crisp and delightfully flavoured, 'Ovaltine' Chuckles are prepared from ingredients of the highest quality and are specially fortified with additional vitamins B and D. They constitute an easily digested, most nourishing and economical weaning food.

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The well-known brand of Colloidal Aluminium Hydroxide. A most effective antacid. Available in the form of Powder, Tablets or ALOCOL CREAM—a stable and palatable cream.

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JUGS ★

771 Maroon Retail price 13/6

772 Metallic finish Retail price 15/6
(Blue, green and silver)

FLASKS ★

551 1 Pint Retail price 5/3

553 2 Pint Retail price 10/0
(Assorted blue, green and red)

★ Jugs packed 12 in carton.

Flasks 1 pint 48 in carton.

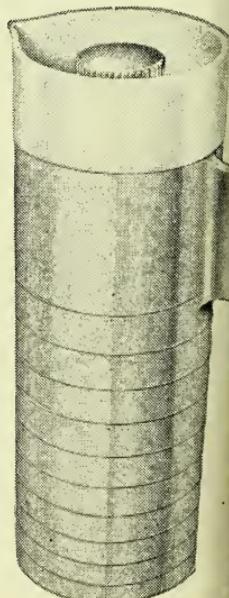
Flasks 2 pint 24 in carton.

Obtainable from your usual wholesale Chemist but in case of difficulty please write to:—

L. REES & CO. LTD.

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Telephone : Monarch 2651 Telegrams : Elreesonia, Ave, London



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NERVONE[®]

BUILDS UP NERVE POWER

Regd.

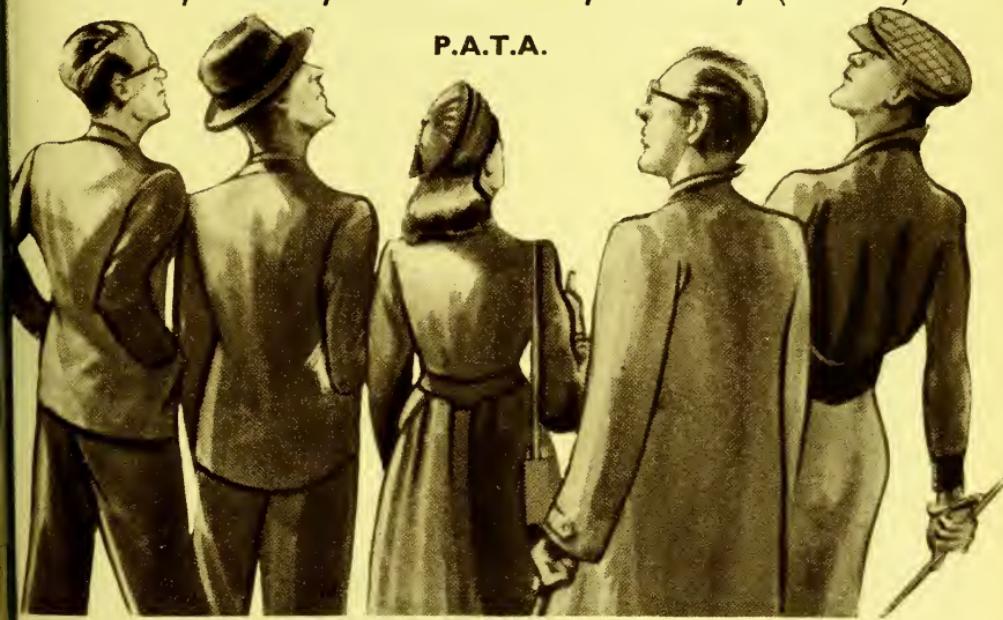
Consistent advertising in the national press has created a lively demand for 'Nervone' the new Bio-Chemic tablet. An extensive poster and screen campaign is now planned to increase further the sale of this fine preparation. More and more of your customers will be asking for 'Nervone' and experience so far has shown that repeat sales and recommendations flow freely from initial orders. It will pay you to stock—and show—'Nervone.' Remember each sale means a

PROFIT OF ONE SHILLING AND SIXPENCE !

ORDER NOW THROUGH YOUR WHOLESALER

Retail 5/6 and 22/-. Wholesale 48/- and 192/- (inc. tax)

P.A.T.A.



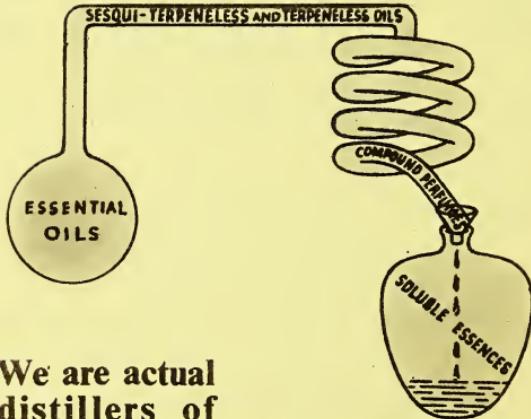
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Standard Synthetic

ESTABLISHED
1923

Managing Director: John Leslie Hindle, B.Sc.

LTD



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**LOZENGES · PASTILLES
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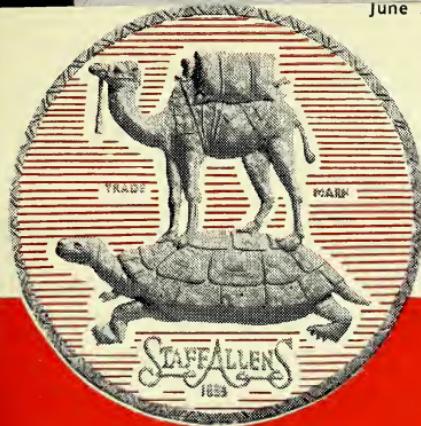
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PYRETHRUM & DERRIS EXTRACTS

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Staff Allen's English distilled Essential Oils are of outstanding high quality, esteemed and used throughout the world.

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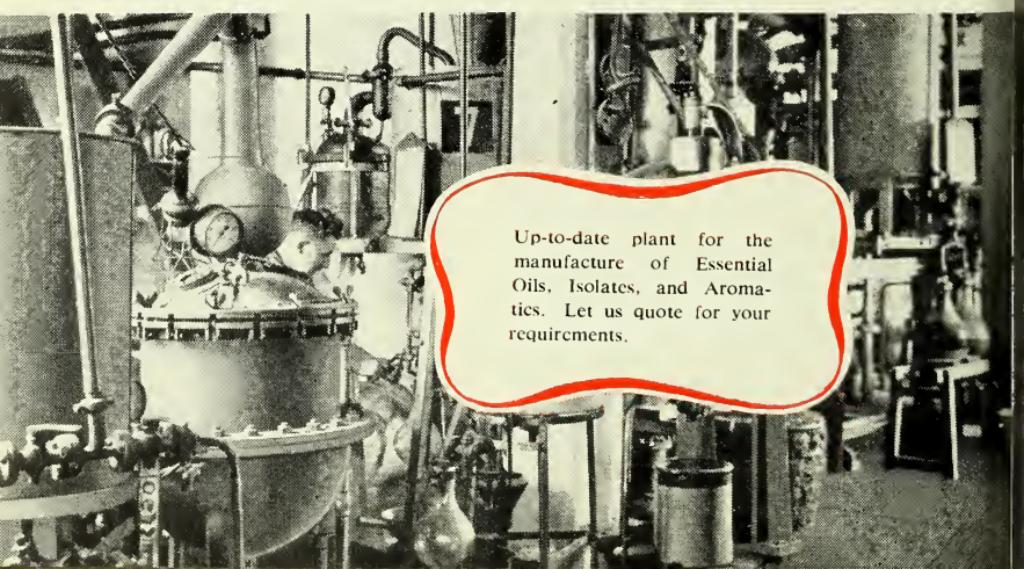
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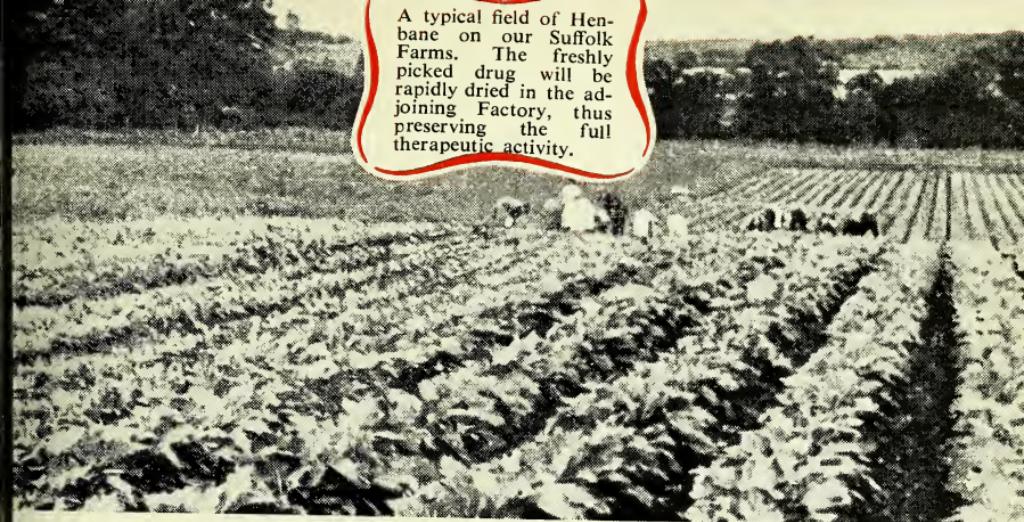
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Our Perfumery Laboratory manufactures a wide range of perfume bases for use in alcohol, creams, lotions, powders, etc., etc. In addition there are full ranges of Soap Perfumery Compounds specially formulated for this industry.

ROSE . JASMIN . MUGUET . LAVENDER . PINE . etc., etc.



Up-to-date plant for the manufacture of Essential Oils, Isolates, and Aromatics. Let us quote for your requirements.



A typical field of Henbane on our Suffolk Farms. The freshly picked drug will be rapidly dried in the adjoining Factory, thus preserving the full therapeutic activity.

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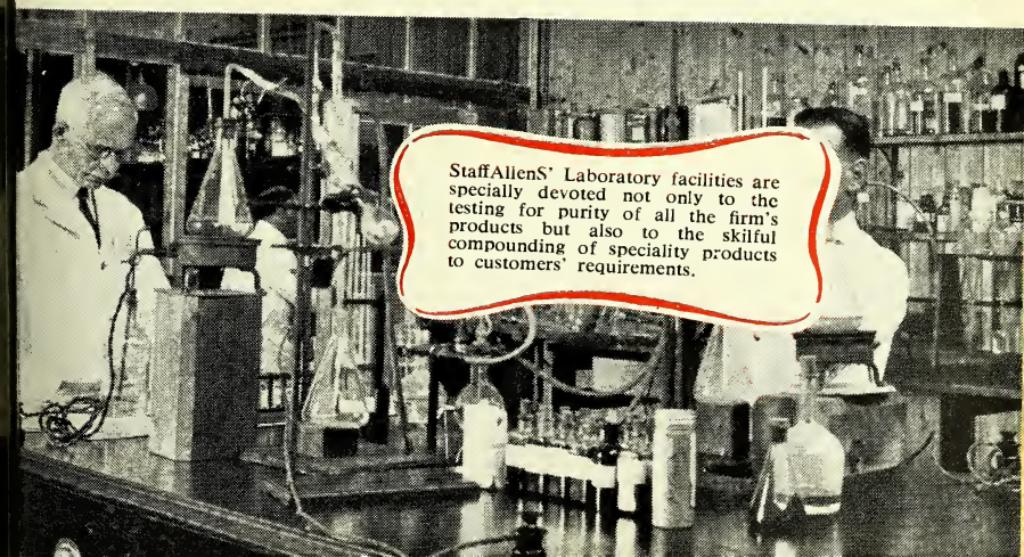
Our English-distilled and imported oils have for generations been accepted as the standard of purity both at home and overseas.

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ALMOND . CHAMOMILE . DILL . ORRIS . PATCHOULI . NUTMEG . SANDALWOOD . CORIANDER . CASCARILLA . etc., etc.

isolates ..

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UCALYPTOL . CITRAL . etc., etc.



Staff Allen's Laboratory facilities are specially devoted not only to the testing for purity of all the firm's products but also to the skilful compounding of speciality products to customers' requirements.

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Our specialities, as leading manufacturers of preparations for the control of insect pests, include:—

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TEETHING JELLY

"Takes the tears from teething time"

A non-
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Cost 12/-
per dozen
plus 4/- P.T.

—

Retail
1/10
per tube

HEWLETT'S Honey-sweet TEETHING JELLY is being advertised extensively in National periodicals and on the transport systems of London and Glasgow. This product has been introduced only after careful and extensive research in the laboratories of the House of Hewlett, in the confidence that it is by far the most handy, palatable and effective method yet devised of soothing infants' gums during teething time.

C. J. HEWLETT & SON LTD

Manufacturing Chemists

35-43 CHARLOTTE ROAD, LONDON, E.C.2, and at Glasgow

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DRUGGISTS' SUNDRIES and DRESSINGS

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GALE'S are Sole Proprietors of
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ALL Tyebrand injections are standardised preparations of stable therapeutic value, made under expert supervision. They cover a wide range of B.P. and non-official formulæ, including:

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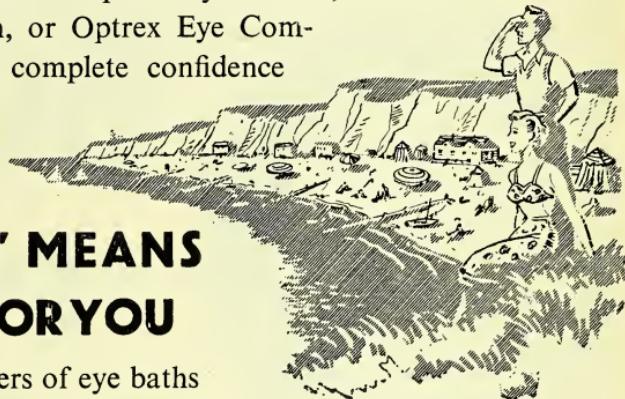
All these quick selling, nationally advertised lines be included in a combined order (with a minimum value of £5) to qualify for best display discounts. This gives you maximum profit on the full range of products illustrated above. New and attractive display material are available on request.

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BEECHAMS PILLS LTD., ST. HELENS, LANC.

(*Sole Selling Agents in the United Kingdom*)
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In the realm of 'Sight Care' Optrex products hold indisputable sway. Whether your customers' requests are for Optrex Eye Lotion, the Optrex Eye Bath, or Optrex Eye Compresses, you sell with complete confidence every time.



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Many people have become users of eye baths and eye compresses only because the Optrex name instantly suggests that these two accessory products are plainly right for eye health. As the sales of Optrex Eye Lotion grow (and they are growing fast !) the sales of Optrex Eye Baths and Optrex Eye Compresses will grow too. Be sure that you hold adequate stocks of *all three products.*

Optrex

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Sole distributors for Optrex Ltd., Perivale Laboratories, Ltd., Melvet Ltd., Vetco Ltd.



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you can confidently
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MERCOLIZED WAX

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PILENTA SOAP

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A division of British Chemicals & Biologicals Ltd.

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YOU CAN HELP busy mothers by drawing their attention to Heinz Strained Foods.

As you know, doctors and welfare clinics are advising mothers to give their babies sieved vegetables and fruits daily, from 3-4 months onwards. It is difficult for a busy mother to carry out this excellent advice if she has to cook and sieve these foods herself.

Nor can she do the job so well as Heinz. Her methods tend to lose the mineral salts and to destroy the vitamins. Heinz prepare the foods in such a way that maximum nutritive factors are retained.



57

HEINZ STRAINED FOODS

All Set... to sell to MEN **Puck** **REGD** **SWIM CAP**

Just the thing for men who swim, dive, play Waterpolo, this lightweight cap with close-fitting chinstrap, keeps hair out of the eyes, protects scalp from swimming-bath chemicals. There will be lots of business here. Supplied in outer containers containing 4 doz. assorted (red, yellow, pale blue and white). Each cap in individual carton. Retails at 1/9 inc. tax.

*Order
this sure selling
line NOW!*

Only wholesalers supplied

GROVEWELL LTD. 656 Forest Rd., Walthamstow, London, E.



*Sunny Days
mean
Hat Dye Sales*

Straw hats are fashionable again, but the sun of last year's Summer has faded most of them. More and more women are asking for Luton Straw Hat Dyes, so stock up now to meet this demand.

Dull or Glossy Series

Standard size 13/6 per doz. Retail 1/6 per bott.
Small size 10/6 per doz. Retail 1/2 per bott.
(P.A.T.A.)

Both less 5% for cash in 7 days
Attractive Shade Cards and Show Material
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LUTON STRAW HAT DYE

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FOR TEETHING AND
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QUICK SALE!

Coronet low priced cameras backed by an extensive advertising campaign are going to sell fast. Re-stock NOW to meet the great demand during holiday months.

Make sure of ample stocks of
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CAMERA
FOR THE
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THE OUTSTANDING
PINE DISINFECTANT
and GERMICIDE

To maintain quality, supplies were restricted during the war. Today Drummer Pine rapidly regains its leading position. In consequence of the goodwill of the trade and public. People have confidence in the powerful disinfectant germicidal properties of DRUMMER PINE and they love the fragrance that "spells clean."



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press advertising
commence in June*

WILLIAM EDGES & SONS LTD BOLTON
JN 786

FALCONER'S GOLDEN COMPOUND

The ideal Lotion

Lumbago, Rheumatism

Price 2/2½ per bottle including purchase tax.
(P.A.T.A.) ONE SIZE ONLY
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D & P 24-HOUR SERVICE

Why suffer poor quality and delays this season. Our work guaranteed including:

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27 CENTRAL DRIVE, BLACKPOOL

TWELVE PHONE LINES at your service

An efficient, courteous and prompt DAILY DELIVERY
for GREATER LONDON and the HOME COUNTIES

'Phone EUSTON 2524

until 12 o'clock (Saturday 10.30 a.m.)

**AND RECEIVE YOUR GOODS
THE SAME DAY**

No limit to number or variety of lines

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ROBERT STREET, LONDON, N.W.1

Insulin, Streptomycin, Penicillin, also D.D.A. Preparations In Stock



These EUCRYL
advertisements
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bring you
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for Britain's largest-
selling Tooth Powder

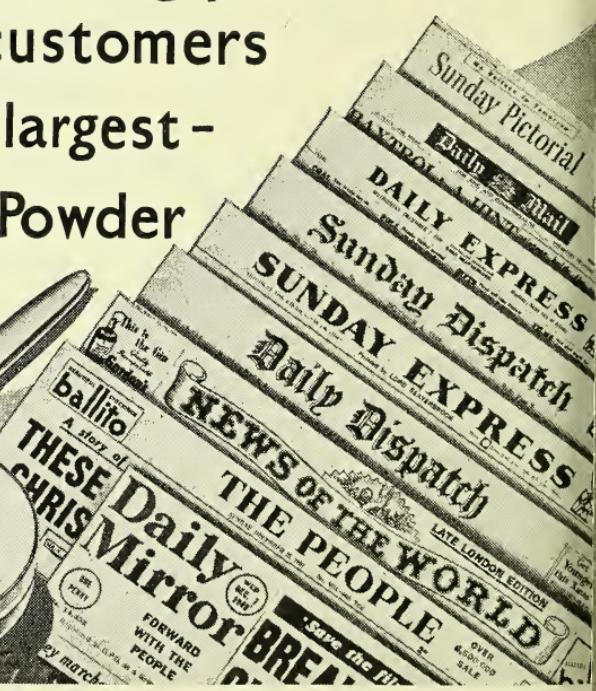


Every time a Eucryl advertisement appears, over 20 million people see it—thousands of new buyers are changing to this best-selling Tooth Powder. This means new business for you and permanent business, too—for Eucryl users seldom change to any other dentifrice.

★ Free Display Material

Link up with this bigger Eucryl campaign—send for details of free sales-aids to Eucryl Ltd., Southampton.

These EUCRYL
advertisements
in these papers
bring you



EUCRYL

TOOTH POWDER, DENTURE POWD
AND DENTAL PLATE FIXATIVE



PARASITES ON POULTRY



POULTRY FLEA



POULTRY LOUSE



POULTRY RED MITE

'Lorexane' Dusting Powder contains pure gamma benzene hexachloride—a powerful, but non-irritant insecticide. Particularly effective against the insect pests which worry animals and birds, 'Lorexane' can be recommended with confidence to poultry-keepers, for the swift eradication of lice, red mite, fleas, etc.—parasites which, unchecked, can soon impair development of the birds, reduce egg production and even cause death.



Equally effective against parasites on dogs and other domestic animals.

In convenient sprinkler-top containers of 100 grammes—Retail Price 2/-. Also in packings of 500 grammes and 3 kilos.

From your wholesaler or, in case of difficulty, apply to your nearest I.C.I. Sales Office:—London, Bristol, Birmingham, Manchester, Glasgow, Edinburgh, Belfast and Dublin.

'LOREXANE'

TRADE MARK

DUSTING POWDER

IMPERIAL CHEMICAL (PHARMACEUTICALS) LTD

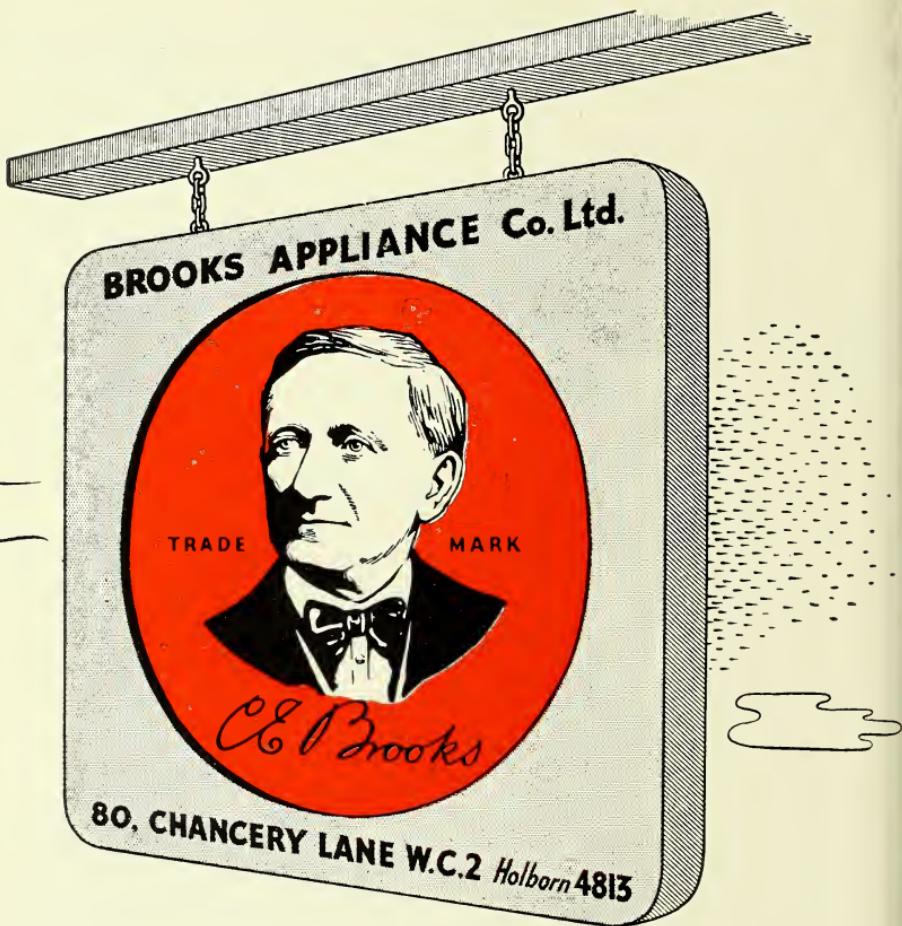
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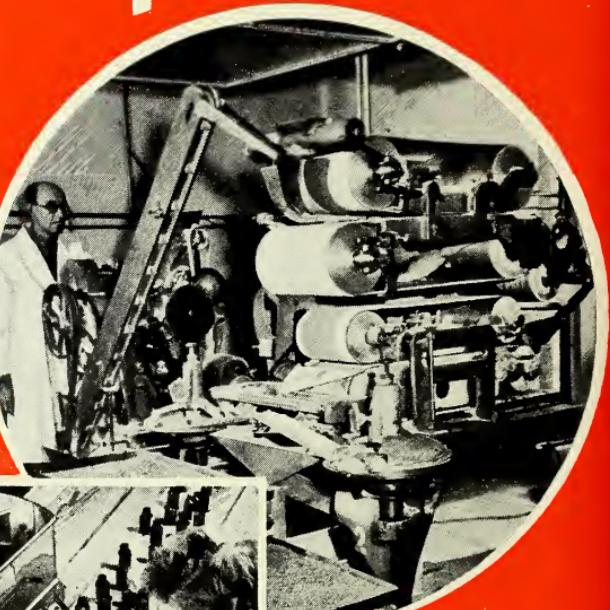
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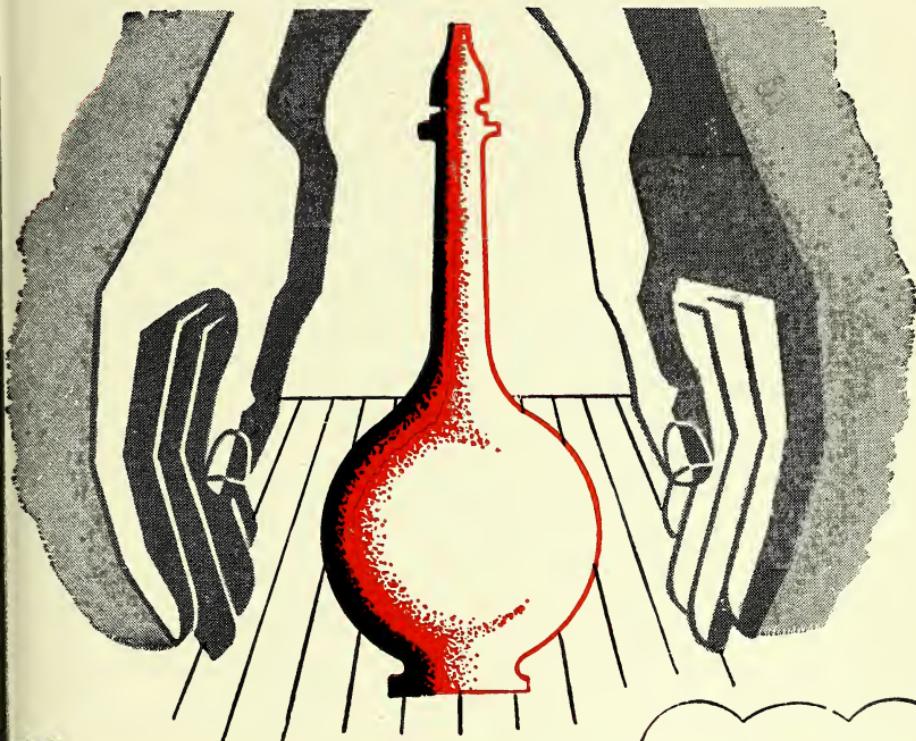


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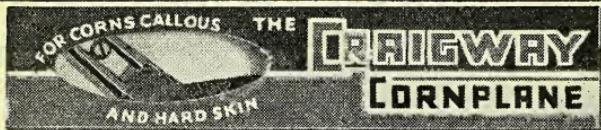
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*A warm line
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MOSELEY moulded hot water bottles are supplied in red, green or blue, whilst the moulded cot hot water bottles can be had in a variety of attractive pastel shades. Handmade, fabric reinforced hot-water bottles are supplied in red or white.

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24-HOUR DELIVERY SERVICE

ARE YOU ON THE RIGHT SCEN

Are you offering women toilet soap that is really well perfumed, at a price they can afford to pay? Yes? Then you are already stocking Lilac Spray already displaying the decorative counter carton. Retail Price 8½d per 3-oz. tablet. (Inc. P.T.)



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For Coughs, Colds, Bron-
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Also 7/- per Carton of 12
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And for other Coughs
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Retail carton Price of 45 2/6 for
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Fennings remedies supported by a continuous advertising campaign are in constant demand. Wise mothers always keep Fennings Remedies handy; they have proved their value by experience. Make sure you have sufficient stocks . . . order through your usual wholesaler, or if in difficulty write to:-

ALFRED FENNINGS • HORSHAM • SUSSEX

Phillips'
Dental Magnesia

**When Selling
Holiday Needs**

ALWAYS SUGGEST

PHILLIPS'
PRODUCTS

'MILK OF MAGNESIA'
Liquid and Tablets

**PHILLIPS' DENTAL
MAGNESIA TOOTHPASTE**

When customers ask for holiday needs—sun glasses, lotions, bathing caps and the rest—be sure to suggest Phillips' Products as well.

‘Milk of Magnesia’* the family Antacid with the gentle corrective action suitable for young and old alike; ‘Milk of Magnesia’ Tablets so handy for pocket or handbag. Phillips’ Dental Magnesia Toothpaste to dispel mouth-acid and brighten the teeth.

THE CHAS. H. PHILLIPS CHEMICAL CO. LTD., 179, ACTON VALE, LONDON, W.

* ‘Milk of Magnesia’ is the trade mark of Phillips’ preparation of magnesia.

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Manufacturing Chemists

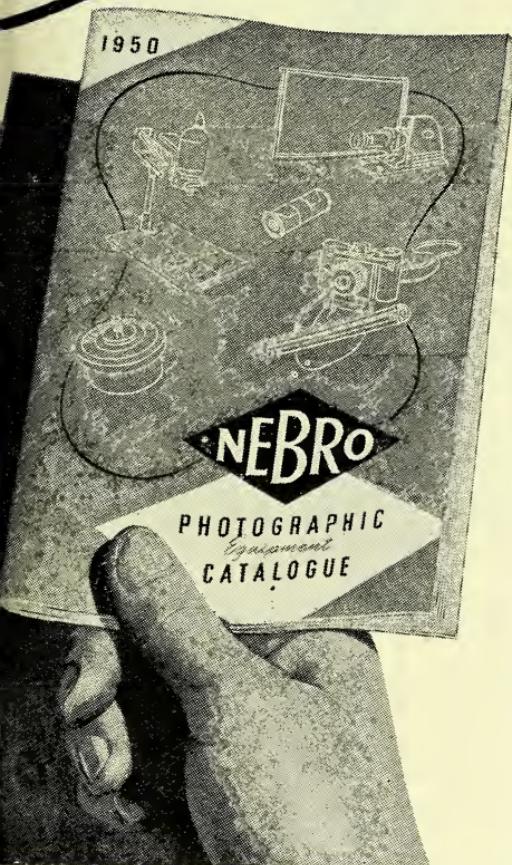
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ALOIN	IODIDES
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ATROPINE & SALTS	PHENAZONE
BARBITURATES	PODOPHYLLIN RESIN
BISMUTH SALTS	QUININE & SALTS
BROMISOVALERYLUREA	SALICYLATES
CAFFEINE & SALTS	SANTONIN
CHLORAL HYDRATE	STRYCHNINE & SALTS
CHRYSAROBIN	SULPHAGUANIDINE
CITRATES	THEOBROMINE & SALTS
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are pulling in
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The Chemists' Standard!

NATIONAL FORMULARY 1949

PASTILLES

and

LOZENGES

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Krameria et Cocaine

Ample supplies always available



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Definition of Drugs —a difficulty removed

The Joint Sub-Committee on the Definition of Drugs by defining FOOD and DRUG, and by drawing attention to the chief functions of each, has given guidance to practitioners on a question which has been not entirely free of ambiguity.

It is of particular interest to note how closely the committee's recommendations follow existing practice in a well-known case. Bemax, for example, has been prescribed by the profession in cases of "established diseases" since its first production 20 years ago, and used also by healthy people to preserve their health.

Notes on "Bemax as a therapeutic agent" are available on request from Dept. A.A.7.

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* The above advertisement is appearing in the
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Bemax is used in the treatment of such "established diseases" as peptic ulcer, cardiac disorders, atonic constipation, chronic rheumatism and arthritis, hyperthyroidism, marasmus.

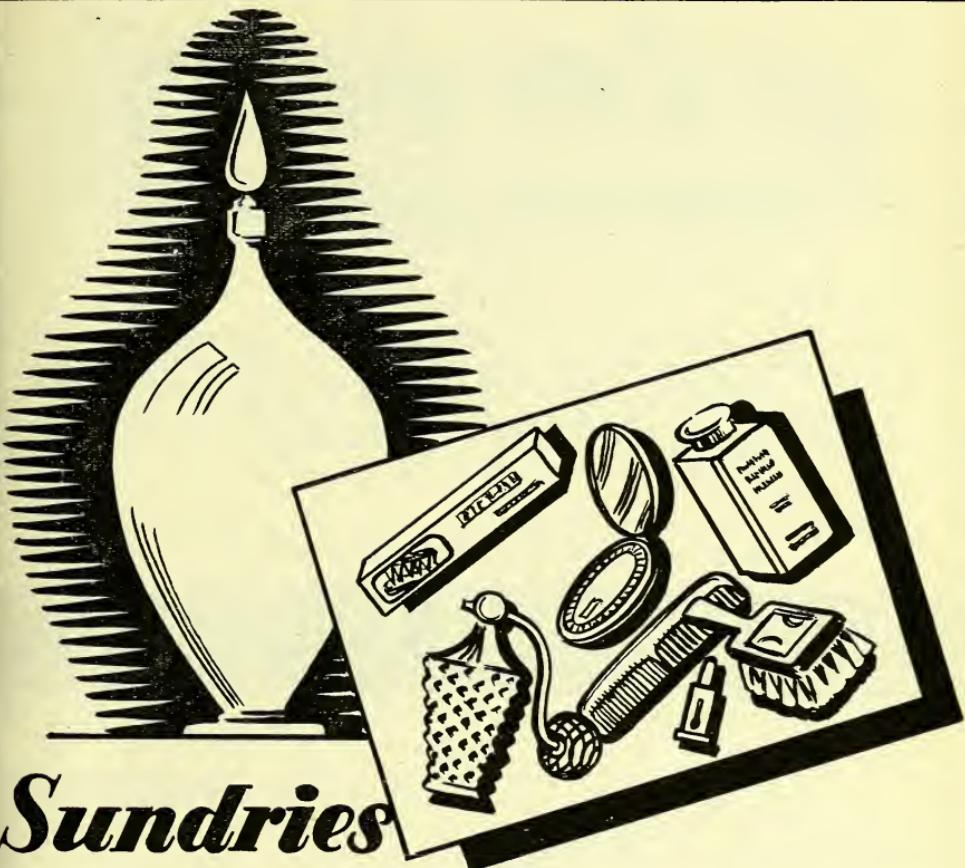
Its use is based on its specified content of the various factors of the vitamin B complex in amounts therapeutically effective. For these conditions therefore Bemax is prescribable.—Sub-Committee's Report para. 3.B. (iii)

NOT PRESCRIBABLE

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Bemax is invaluable for this purpose because it contains : 30% protein with essential amino-acids—easily digested carbohydrate with low fibre content—the vitamins of the B complex and iron.

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DRYNESS
FOR ME"

"Just a few drops of Blue Orchid tonic brilliantine bring back the lustre to my hair, and keep it glamorous all day long."



Delavelle
Blue Orchid
Tonic Brilliantine

2/3 and 3/9, from leading chemists, hairdressers and stores. If difficult to obtain write Delavelle (D.M.2) 35 Old Bond Street, London W.I. enclosing 2/3d. P.O.

IT'S WINNING

because it's not just another brilliantin but a new hair beautifier with an added tonic, and perfumed with Delavelle's exclusive "Blue Orchid" fragrance

IT'S SELLING

Advertising is swinging into its stride in national and provincial daily papers, and in a wide range of magazines. Blue Orchid Tonic Brilliantine is going to town all over the country in a big way.

Are your stocks ample to cope with the increasing demand?

delavelle

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Send your order, or write for particulars now

Summer Reminders

for

Rexall Agencies

With the approach of the holiday season there will again be abundant opportunities for Rexall Chemists to increase their over the counter business. More tooth brushes are sold between now and the end of August than the rest of the year put together. Calamine Lotion in its modern pack, promises to be a larger seller than ever; the three sizes of Olive Oil at low prices give the public wonderful value and quality. Other products which always have a big run at this time of the year, include Senna Pods, Syrup of Hypophosphites, Rexall Yeast Flakes, Blood Purifier, Cream of Magnesia Tablets and Liquid, Eye Drops, Rose & Boric Eye Lotion, and there's always a terrific demand for Aspirin Tablets for summer headaches and occasional chills.

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Sun Glasses, Sponge Bags, Cosmetic Bags and Toilet Holdalls, Dressing Combs, Hair Brushes, Toilet Soaps all help materially in making up an attractive window to assist vacation business. Now is the time to show these goods in the windows and on your counters.

Inquiries for REXALL & BISMA-REX from districts where there is no existing Agency will receive every attention—Please write to

REXALL DRUG COMPANY LTD.
Kirkwhite Street Nottingham

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FELLOWSHIP:— The F.N.A.O. and F.N.A.O. (Hons.) Diplomas are recognised Optical Qualifications and entitle the recipient to be registered by the Central Professional Committee for National Health Service.

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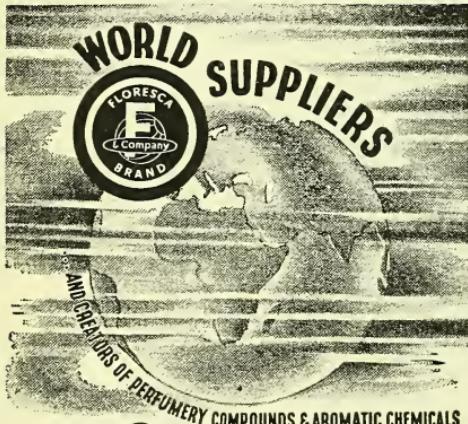
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Examination Syllabus, Entry Forms, also Application Forms etc. may be had from:—

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PERFUME COMPOUND SPECIALISTS

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MALTED MILK
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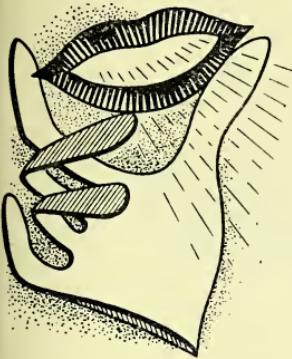
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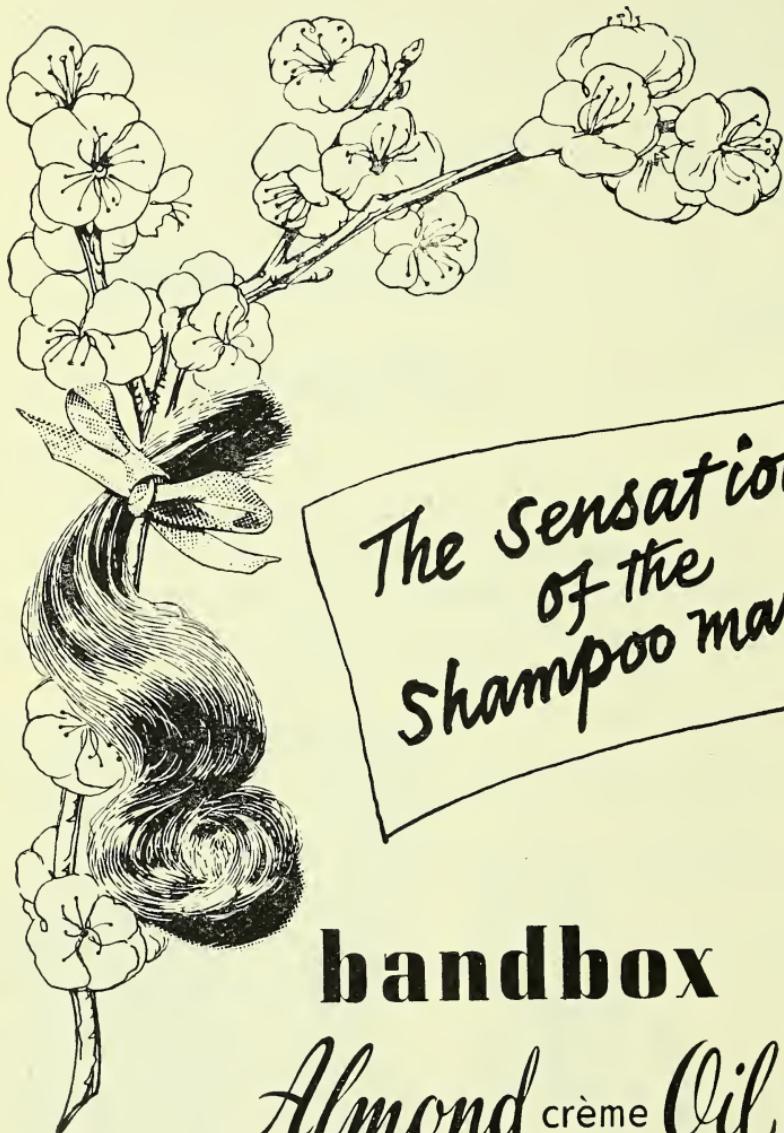
You can easily sell Lip-Cote

LIP-COTE—the new liquid preparation that makes lips smearproof—sets the seal on your lipstick sales. Women have accepted LIP-COTE as a cosmetic essential—the logical outcome of widespread national advertising of a product that has proved its worth. The profit margin is generous, and colourful, compelling, display material is yours for the asking. Send NOW for details of—

Lip-Cote



B.G.P. (Cosmetics) Ltd.
37 Chesham Place • London • S.W.1
(SLOane 4107)



The sensation
of the
shampoo market

bandbox

Almond crème Oil shampoo



3 good shampoos with conditioning action

1/3

Your cost 8/9 doz.
1 gross lots less 5%
2 " " " " 7½%

ASHE LABORATORIES LTD. LONDON, S.W.

For the treatment of HAY-FEVER

'Benadryl'

Physicians have found it possible to control the symptoms of hay-fever in many patients by the oral administration of 'Benadryl'. This potent histamine antagonist is also invaluable for patients who have not acquired complete tolerance to grass pollen after desensitizing courses with pollen extract.

One 50 mgm. capsule of 'Benadryl' taken when hay-fever symptoms first appear may be expected to give relief for from three to five hours. Subsequent dosage depends on the response of the patient and on the prevailing atmospheric conditions. For infants and children, Elixir 'Benadryl' or 25 mgm. capsules are available.

Minimum Retail Prices (Exempt P.T.)

Capsules: 25 mgm.: Bottles of 50, 4/6; 500, 40/-.

50 mgm.: Bottles of 50, 7/6; 500, 70/-.

Elixir: Bottles of 4-fl. ozs., 3/-; 16-fl. ozs., 10/-.

'Emplets': 25 mgm.: Bottles of 50, 4/6; 500, 40/-.

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HOUNSLOW, MIDDLESEX.

Telephone: Hounslow 2361
Inc., U.S.A., Liability Ltd.



DRUGS, GALENICALS
and PACKED GOODS of
FINE
QUALITY



HARKER STAGG LIMITED

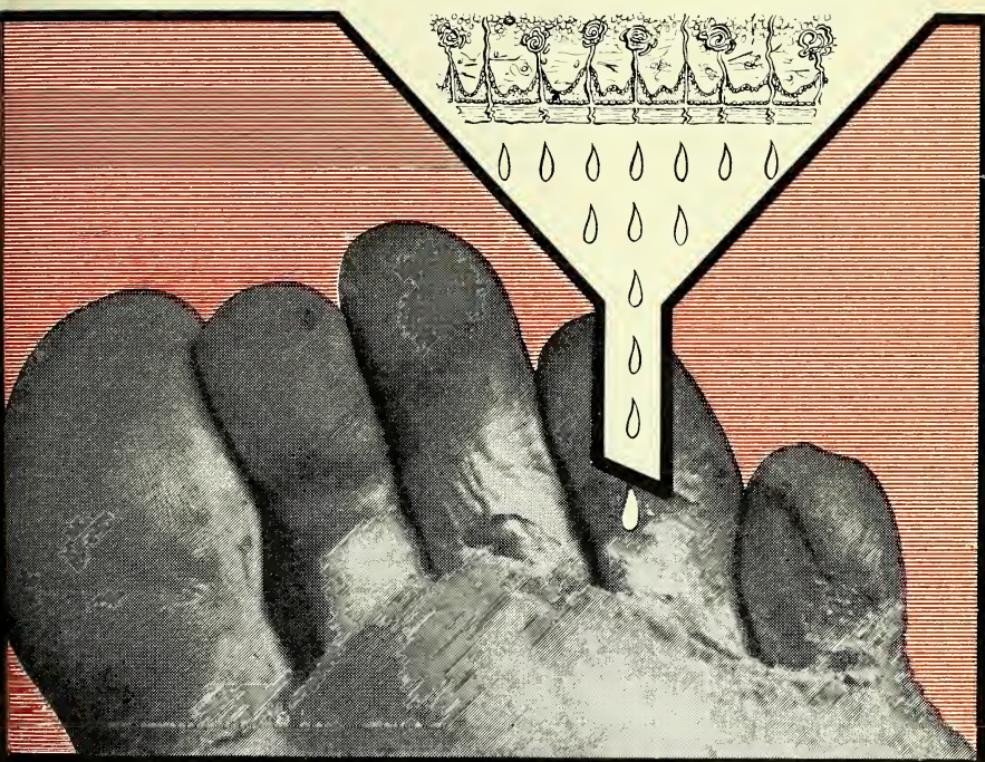
70a, HAMSTEAD ROAD
HANDSWORTH, BIRMINGHAM, 19
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EMMOTT STREET
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PHARMACEUTICAL
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PERFECTION



Undecylenic Acid: an effective therapeutic agent against fungous infections of the skin



THE STUDY of fungicidal principles in sweat has led to the use of naturally occurring fatty acids in therapeutics. Fungicidal Ointment-Boots contains 5% undecylenic acid and 20% zinc undecylenate in a water-miscible base. Fungicidal Powder-boots contains 2% undecylenic acid and 20% zinc undecylenate in a starch and kaolin base.

Fungicidal Ointment-Boots

Tube of approx. 1 oz.

Fungicidal Powder-Boots

Sprinkler containing approx. 2½ oz.

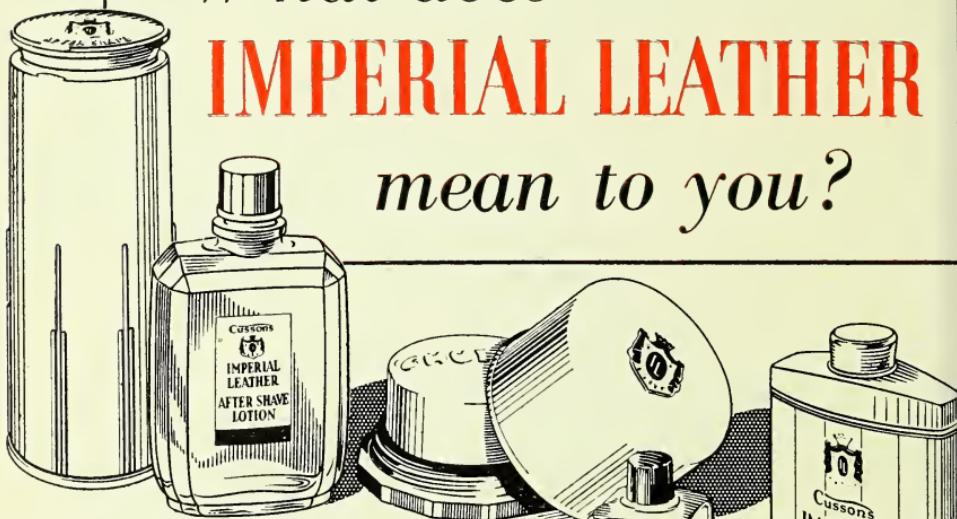
Usual Trade Terms given

Literature and further information available from the Wholesale & Export Department, BOOTS PURE DRUG COMPANY LIMITED NOTTINGHAM ENGLAND



S.66A

What does IMPERIAL LEATHER mean to you?

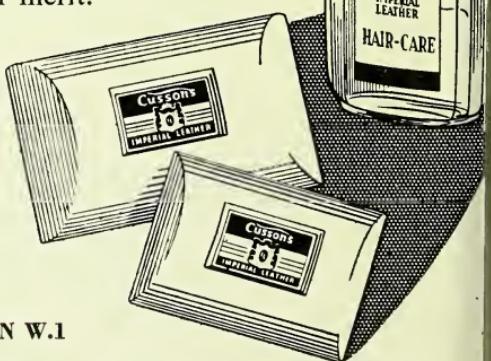


A FASCINATING perfume? A standard of quality noticeably better than the rest? A full range of toilet luxuries that find instant acceptance from your customers? The usual answer is all of these things. For the national advertising which has created so great a demand has done so mainly because it has directed attention to products of exceptional merit.

Cussons

CUSSONS SONS & CO. LTD

84 BROOK ST, GROSVENOR SQ, LONDON W.1





H.R.NAPP LIMITED



A selection from the range of



ETHICAL PRODUCTS

all supported by intensive
medical propaganda, and
in steady demand

- "ABECEDIN" Vitamins A.B.C.D
(Tablets and Emulsion)
- "CAAPI" Anti-Coryza Tablets
- "DYSPASTOL" for Dysmenorrhœa
- "HYPNASOL" Sedative Elixir
- "MINACEDIN" Vitamins A.B.C.D with
Minerals
- "RAMINAL" for Hyperpiesis
- "SEDONAN" for Otitis Media

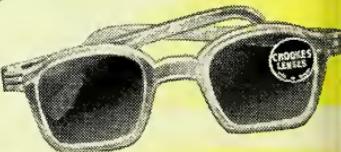
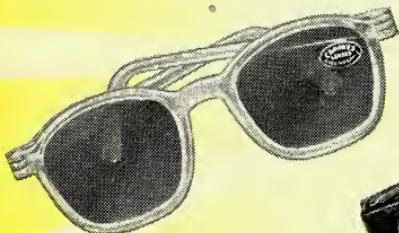
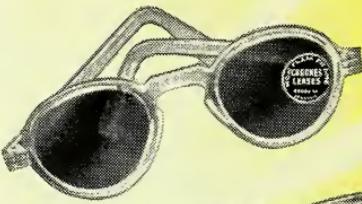
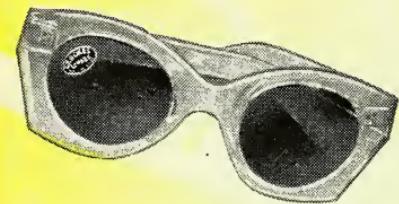
H. R. NAPP LIMITED
3 & 4 CLEMENTS INN, LONDON, W.C.2

Popular & Fast Selling

SUNGLASSES

75 styles for 1950!

Retailing from 8^d to 2gns.



The 1950 range of Bartlett Sunglasses consists of popular and fast selling modern styles that are priced right to bring you quick and profitable results—truly it is the most complete assortment yet offered to the trade!
Send for illustrated leaflet.

Be sure to consider carefully this outstanding Bartlett range. Order from your wholesaler.

Wholesale enquiries to

ALFRED FRANKS & BARTLETT CO., LTD
AUDREY HOUSE, ELY PLACE, LONDON, E.C.I

THERE'S

NEW DRIVE*behind***CAMDEN
ETHICALS**


Look out for an increased number of E.C. 10's for Camden Ethicals, especially :—

TAMPOVAGAN

prescribed for leucorrhœa and all inflammatory conditions of the vagina and cervix. There are five types including PSS. (Penicillin, Sulphanilamide and Sulphathiazole).

TRANSPULMIN

"If an analeptic is necessary 'transpulmin' in doses of 5-7 min. (0.3-0.62 ml.) four-hourly or p.r.n. is perhaps the most valuable cardio-respiratory stimulant."

Professor Gaisford—B.M.J., 11th Feb., 1950.

NOHAESA

Ointment and suppositories for haemorrhoids. Watch for an increased demand as our medical campaign gets into swing.

TABLETS FOR N.H.S. DISPENSING

N.F. and other widely prescribed tablets showing a considerable margin on Drug Tariff prices.

Tab. Codein. Co. B.P.

Ephed. Hyd. B.P.

Tab. Ferri. Sulph. Co. B.P.C.

Tab. Phenobarbiton. et Theobrom.

Tab. Stilboestrol.

Tab. Sulphathiazol.

Tab. Thyroid. B.P.
Dextro Amphetamine Sulphate 5 mgm.
P.A.S. 0.5 gm.
(Sodium Para Amino Salicylate)

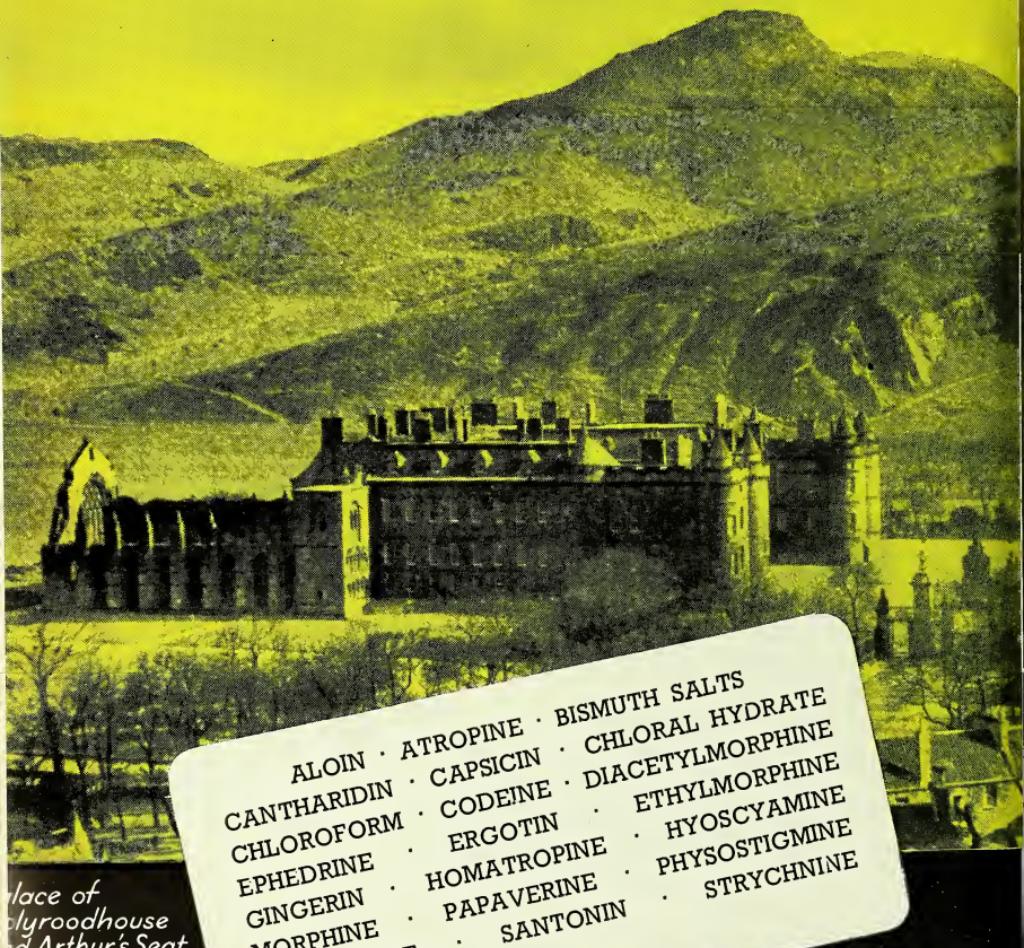
Literature and prices from :

CAMDEN CHEMICAL COMPANY LTD.

61 GRAY'S INN ROAD, LONDON, W.C.I

Telephones : HOLborn 7524 and 1318

Famous the world over



Place of
plywoodhouse
d Arthur's Seat

ALOIN · ATROPINE · BISMUTH SALTS
CANTHARIDIN · CAPSICIN · CHLORAL HYDRATE
CHLOROFORM · CODEINE · DIACETYL MORPHINE
EPHEDRINE · ERGOTIN · ETHYL MORPHINE
GINGERIN · HOMATROPINE · HYOSCYAMINE
MORPHINE · PAPAVERINE · PHYSOSTIGMINE
PILOCARPINE · SANTONIN · STRYCHNINE



BLANDFIELD CHEMICAL WORKS · EDINBURGH

Manufactured in Edinburgh by

T. & H. SMITH LTD

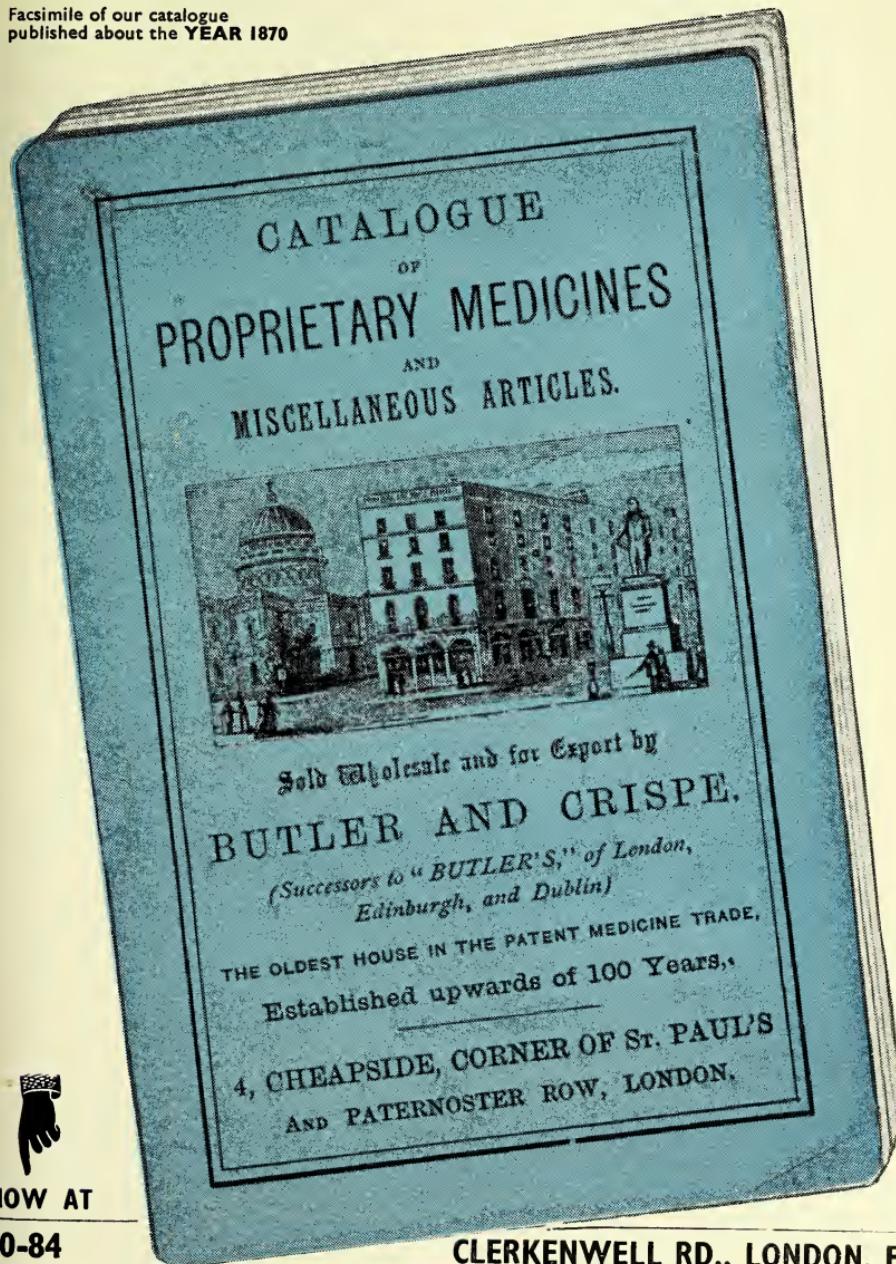
at Blandfield Chemical Works

BUTLER & CRISPE

LIMITED

THE HOUSE FOR
PRESCRIPTIVE PHARMACEUTICALS, ETC.
WITH A LONG REPUTATION FOR SERVICE

Facsimile of our catalogue
published about the YEAR 1870



NOW AT

80-84

CLERKENWELL RD., LONDON, E.C.1

THE Solution FOR
ISOTONIC
EYE-DROPS
Problems

Our answer is
"GUTTABS"

Solution Tablets of Sterile Sodium Chloride, which provide a convenient and accurate method of rendering Eye-drops isotonic in accordance with official directions. The use of single Tablets, or a combination of suitable strengths, allows any of the stipulated weights of Sodium Chloride to be dispensed.

**"Guttabs" are packed in tubes of 20.
Strengths available : $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1, $1\frac{1}{4}$ grains.
Price : 6d. per tube.**

"Guttabs" pro Physostigmine contain Sodium Chloride $\frac{7}{8}$ gr., and Sodium Metabisulphite 1/20 gr.

"GUTTABS" KIT

This comprises one tube of 20 of each of the above strengths of "Guttabs," and one tube of 20 "Guttabs" pro Physostigmine, packed in a divided slide box.

Price : 3/- per box.



**THORNTON & ROSS
LIMITED**

LINTHWAITE LABORATORIES · HUDDERSFIELD



For the sickroom, Zoflora can be recommended for the dual purpose of purifying the air and, with its pleasantly refreshing perfume, it is conducive to untroubled sleep.

A splendid seller in all seasons, for the home, the hospital and public rooms of every kind.

Zoflora

perfumed

DISINFECTANT

is a preparation of antiseptic floral oils and synthetics, to be diluted with water for spraying.

Retail Prices: In bottles, 2/-, 7/- and 13/6.

Also complete spraying outfits 10/- and 21/-

Usual Trade Discounts



TZ10

THORNTON AND ROSS, LTD., • HUDDERSFIELD • ENGLAND

SIGNIFICANT DATES AND ACHIEVEMENTS

1928**Hepatex Oral**

The first British-made liquid oral liver extract.

1931

The first intravenous liver extract in the world was introduced under the name Hepatex P.A.F.

1936**Neo-Hepatex**

An improved parenteral liver extract for both intravenous and intramuscular injection.

1943**Hepamino**

The first proteolysed whole liver preparation.

1945**Proteolysed Liver Extracts**

The potentiation of *liver extracts* for oral and parenteral use by proteolysis was developed in Evans laboratories and the new Hepatex Oral and Neo-Hepatex were introduced.

TODAY**Evans Proteolysed Liver preparations**

HEPAMINO
HEPATEX ORAL
NEO-HEPATEX

are being used throughout the world

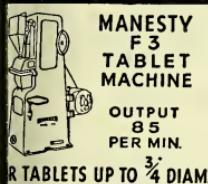


**EVANS MEDICAL
SUPPLIES LIMITED**

LIVERPOOL AND LONDON

MANESTY

TABLET MAKING MACHINERY



**MANESTY
F3
TABLET
MACHINE**

OUTPUT
85
PER MIN.

FOR TABLETS UP TO $\frac{3}{4}$ DIAM.



**MANESTY
HAND
TABLET
MACHINE**

OUTPUT
100
PER MIN.
FOR TABLETS
UP TO $\frac{1}{2}$ DIAM.



**MANESTY
E2
TABLET
MACHINE**

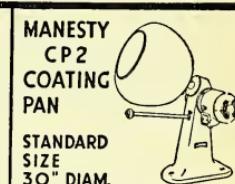
OUTPUT
85
PER MIN.

FOR TABLETS UP TO $\frac{1}{2}$ DIAM.



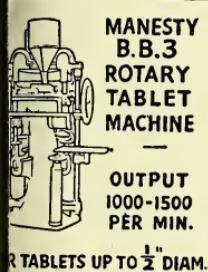
**MANESTY
HAND
COMPACT
PRESS**

OUTPUT
2000
COMPACTS
PER DAY



**MANESTY
CP2
COATING
PAN**

STANDARD
SIZE
30" DIAM.

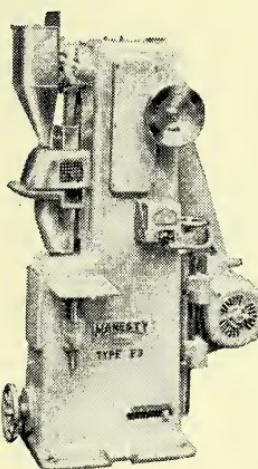


**MANESTY
B.B.3
ROTARY
TABLET
MACHINE**

OUTPUT
1000-1500
PER MIN.

FOR TABLETS UP TO $\frac{1}{2}$ DIAM.

MANESTY F3 TABLET MACHINE



Output
5100
per hour.

Max.
diam.
 $\frac{3}{4}$ "

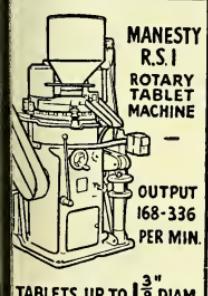
Overload Release and/or Variable Speed Drive optional.



**MANESTY
N°2A
TABLET
MACHINE**

OUTPUT
55-220
PER MIN.

TABLETS UP TO $\frac{1}{2}$ DIAM.



**MANESTY
R.S.1
ROTARY
TABLET
MACHINE**

OUTPUT
168-336
PER MIN.

TABLETS UP TO $\frac{3}{8}$ DIAM.

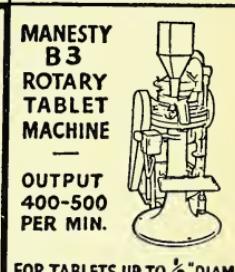


**MANESTY
ROTORGRAN
OSCILLATING
GRANULATOR**

OUTPUT
150-224
LBS.
PER HOUR.

**MANESTY
MIXER**

CAPACITY
100 LBS.
OF POWDER



**MANESTY
B3
ROTARY
TABLET
MACHINE**

OUTPUT
400-500
PER MIN.

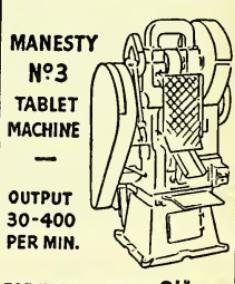
FOR TABLETS UP TO $\frac{1}{2}$ DIAM.



**MANESTY
D3
ROTARY
TABLET
MACHINE**

OUTPUT
300-350
PER MIN.

FOR TABLETS UP TO 1" DIAM.



**MANESTY
N°3
TABLET
MACHINE**

OUTPUT
30-400
PER MIN.

FOR TABLETS UP TO $2\frac{1}{4}$ DIAM.

MANESTY MACHINES LIMITED
SPEKE, LIVERPOOL, 19.

TELEPHONE: HUNTS CROSS 1972

TELEGRAMS: MANESTY, LIVERPOOL

1896 P.A.T.A. 1950

The Proprietary Articles Trade Association represents a long-established system of price maintenance, in which the interests of the manufacturers of branded goods sold in the drug trade, the distributors and the public are balanced and preserved. It ensures for manufacturers a willing distribution service, for wholesalers and retailers a reasonable profit margin, and enables the public to buy the article they want, where they want it, at a fair and uniform price.

Scope of the P.A.T.A. List. The Protected List includes proprietary medicines, veterinary preparations, antiseptics and disinfectants, infants' and invalids' foods, perfumery, cosmetics and toilet preparations.

Retail Section. Admission is restricted to persons, firms or bodies corporate whose names appear in the statutory register of pharmaceutical premises. The annual subscription to the Retail Section of the P.A.T.A. is 10s. 6d.

Direction of Sales. It is the Council's policy to recommend manufacturers of medicinal and surgical proprieties included in the P.A.T.A. List to promote the sale of such articles through chemists.

Owners of proprietary articles who are not at present members of the P.A.T.A. are invited to apply to the Secretary for particulars of the Manufacturers' Section.

P.A.T.A.

43 GORDON SQ., LONDON, W.C.1

Telephone : EUSton 3275

A GOOD SELLING LINE
WITH UNIQUE APPEAL

VINE'S “Young Folks” SHAMPOO

Specially formulated to protect the fine hair of children and infants.

“The Children’s Own Shampoo”

Retails at 2/6. Cost 15/- per doz. plus ½ Purchase Tax.

Special offer: 13 to the dozen.

Available from all leading Chemists’ Sundriesmen.
Wholesale enquiries invited.

VINE’S BIOCIN LTD.
222/224 Harrow Road, Paddington, W.2
Telephone : CUN 1172/3/4

OPTICAL LENS CLEANERS

CHAMOIS or TEXTILE

Tastefully Printed with your name, etc.

PAYNE GRAHAM LTD., 583 Scotland St., Glasgow, S.1

S.T. I. SUN TAN POWDER comp.

Bottles ½ oz. powder to 2 ozs. water. Applied with wadding and gives the admired GOLDEN BROWN Skin Tint with smooth matt finish. Early orders appreciated. 7 lbs. lots at 2/9 lb. post paid.

Makes 224 x 2 oz. bottles.
CHEMICAL MNFG. LABORATORY LTD. DRAKE ROAD WORKS, TAVISTOCK, DEVON (Tavistock 497)

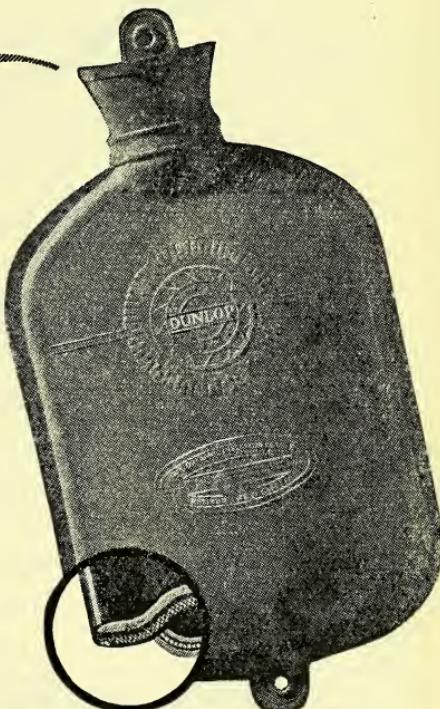
P.A.T.A.



HALL FORSTER & CO. LTD.
NEWCASTLE UPON TYNE

Sell DUNLOP — the name your customers trust

That's why this sturdy hot-water bottle is so universally popular. The name DUNLOP is a guarantee of superlative quality and lasting service. It's a name that everyone knows and trusts. "Dunlop?" they think. "Then it's bound to be good!" And it is good! So stock up with DUNLOP hot water bottles in the comfortable knowledge that you will be selling the finest and most popular line on the market.



DUNLOP HOT WATER BOTTLES

Obtainable from your usual wholesaler

Dunlop Molded Fabric
Insertion built like a tyre

Lemon Juice 38.0% w/v
 Sucrose 23.7% w/v
 Liquid Glucose BP 28% w/v (equivalent to Dextrose (Monohydrate) 10.5% w/v,
 Barley (Sol. Extract) from 7.4% w/v

Plus flavouring and permitted preservative

*As an Antacid
or in febrile conditions*

Glucose *Lembar*

*justifies the highest
professional
recommendation*

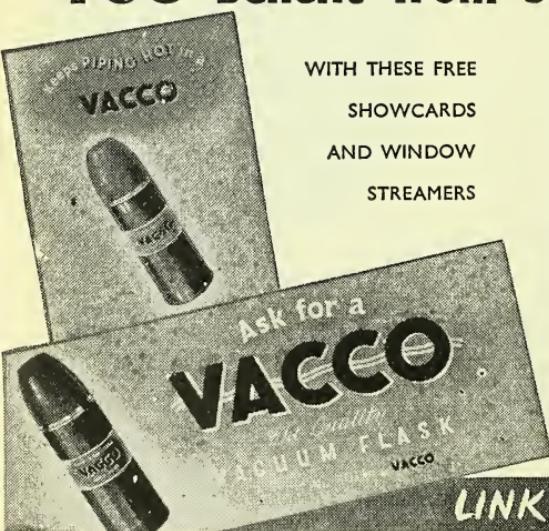
*Obtainable from Wholesale Chemists or from Rayner & Co. Ltd.
RAYNER AND COMPANY LIMITED, LONDON, N.18*

**WE do the Advertising
YOU benefit from Selling**

WITH THESE FREE
SHOWCARDS
AND WINDOW
STREAMERS

VACCO Vacuum Flask advertising — to over 14,000,000 people monthly! — creates widespread demand. Divert this demand to your shop with these striking colour displays, free to every stockist. Details and terms from Vacco Sales Ltd., Grosvenor Gardens House, Grosvenor Gardens, S.W.1. Tel : Victoria 8785.6

DAILY MAIL
DAILY EXPRESS
DAILY MIRROR
DAILY HERALD
NEWS CHRONICLE



VACCO

The QUALITY Vacuum Flask

LINK UP AND SELL!

MOTHAKS

SALES BIGGER THAN EVER

THOMPSON & CAPPER WHOLESALE LTD
Speke Hall Road, LIVERPOOL 19

Announcing



HYPON TABLETS

HYPON TABLETS are a well balanced combination of Acetylsalicylic Acid, Phenacetin, Codein Phosphate, Caffein and Phenolphthalein.

They can be prescribed with confidence as an Antipyretic and Analgesic.

Rapid in action with no depressing side effects, and the inclusion of a fractional dose of Phenolphthalein overcomes the constipating effect often experienced after repeated administration of analgesics.

INDICATED IN : Influenza colds, Rheumatic conditions, Tonsillitis, Headache, Neuralgia, Toothache, and spastic dysmenorrhoea.

FORMULA:	Acid. Acetylsalicyl ...	40.22%
	Phenacet ...	48.00%
	Caffein ...	2.00%
	Codein Phosph.B.P. ...	0.99%
	Phenolphthal ...	1.04%
	Excip ...	7.75%

PACKS:

Dispensing:

Screw-capped glass containers.
600 Tablets ... 33/- each
1,000 Tablets ... 55/- each

Counter Display Cartons:

Cartons containing 36 x 10, Price: 27/- plus 9/- Purchase Tax. Retail Price: 1/4d. per vial (1/1d. plus 3d. Purchase Tax).

Ensure that you hold stocks by ordering now from your wholesaler or direct from the manufacturers.

2 OUTSTANDING PRODUCTS

(C) HYPON TABLETS

(C) CIMLAC GAUZE

Now being intensively advertised and sampled to the Medical Profession



CIMLAC GAUZE

CIMLAC GAUZE is impregnated with sterilized glyco-gelatin mass containing Aminacrine Hydrochloride and Hexylresorcinol, both of which are active against gram positive organisms and B. Pyocyanus.

A bland dressing, which will remain moist and non-adherent. Easy removal is secured without danger of injury to the delicate epithelial and granulative tissues.

Indicated in burns, wounds, boils, carbuncles, varicose ulcers, bed sores.

FORMULA: Aminacrine Hydrochlor 0.1% Hexylresorcinol ... 0.1% in a sterilized glyco-gelat base.

PACK:

24 pieces 4" x 3½" in a round aluminium box.

Trade Price: 5/- per box.

Retail Price: 6/6 per box.

CALMIC LIMITED · CREWE HALL · CREWE

TEL. CREWE 3251 (5 LINES) LONDON: EAGLE HOUSE, JERMYN ST. S.W.1.

A new B. W. & Co. Preparation

'NEO-EPININE' NO. 2

BRAND

COMPOUND SPRAY SOLUTION

○ An entirely new preparation for treatment of bronchial additional to the range of 'Neo-Epinine' Products already issued by B. W. & Co.

○ Contains 'Neo-Epinine' 1 per cent, papaverine hydrochloride 2 per cent, atropine methonitrate 0·2 per cent.

○ Of particular value in stubborn cases of asthma, or where previous treatment is showing a diminishing or unsatisfactory effect.

○ Induces prompt and prolonged anti-asthmatic action.

○ Should be administered with an all-glass atomiser such as the 'Agla' brand Atomiser.

○ Issued in vials of 10 c.c., to retail at 5/6 per vial, tax free.

○ Schedule I, Part I.

'NEO-EPININE' NO. 1 SPRAY SOLUTION

As soon as present stocks are exhausted, the plain solution containing 1 per cent of 'Neo-Epinine' will be known as 'Neo-Epinine' No. 1 Spray Solution.





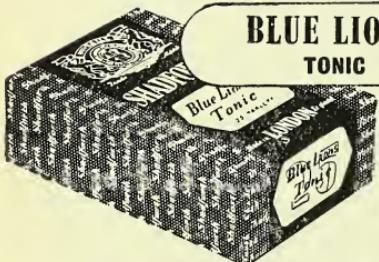
SHADFORTH LIMITED

Proudly Present

THREE PROVED SELLERS IN NEW PACKS



WHITE LIONS
ANTACID TABLETS



BLUE LIONS
TONIC



SHADFORTERS
DIURETIC TABLETS

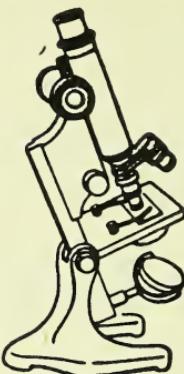
INCREASED TRADE DISCOUNT

These new packs carry 33½% discount backed by National Press Advertising to send you new customers. The repackaging of these products will ensure a bright display in your window and on your counter, attracting more sales.

SHADFORTH LTD.

Manufacturing Chemists

49, KING WILLIAM STREET, LONDON, E.C.4



**CONSTANT
RESEARCH**

Research, Standardisation, Activity, Purity—these important factors have built up the high reputation of "Oxoid" Medical Preparations.



Your orders, by letter, telephone or telegram are dealt with immediately and goods reach you in the shortest possible time.

Among the many "Oxoid" Medical Preparations are: Liver Extract, Hormones, Vitamins, etc.

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LONDON, E.C.4

Telephone: CENtral 9781



The CHEMIST AND DRUGGIST

for RETAILER—WHOLESALE—MANUFACTURER

JUNE 24, 1950

Published weekly at 28 Essex Street, Strand, London, W.C.2

Telephone: Central 6565 (10 lines). Telegrams: "Chemicus, Estrand, London."

1/- each. Annual subscription, which includes *The Chemist and Druggist Diary and Year Book*, 30/-

Volume CLIII

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No. 3670

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NEWS OF THE WEEK

Purchases by Overseas Visitors.—The concession under which relief from purchase tax is allowed on goods under the Personal Export Scheme is now extended to goods of which the tax-exclusive selling price is £5 or more.

Proprietary Association Secretaryship.—The chairman of the Proprietary Association of Great Britain (Mr. F. A. S. Gwatkin) has informed members of the Association that Mr. J. S. Walmsley, having accepted an appointment within the industry, will be resigning from the secretaryship as from January 1, 1951.

This Week's Wages in 1951 Census.—While the Census of Distribution (to be taken next year) will, in general, deal with information concerning sales, purchases, etc., for the whole of 1950, details of the number of persons employed and wages paid in the week ending June 24, 1950, will be among the items to be given. Chemists are advised to keep those details on record.

Increase in Bottle Prices.—Manufacturers announce an all-round increase of 2½ per cent. in the wholesale prices of glass bottles, with effect from June 12. The increase has resulted from the higher cost of soda ash, which rose in price early in the year, and the recent advances in railway transport charges and in petrol. The previous increase (5 per cent.) in prices of bottles occurred on October 1, 1947.

Scottish Executive Election.—Successful candidates in the annual election for six members of the Scottish Department Executive were:—

HUGHAN, S., Glasgow	...	335
ELDER, W. T., Aberdeen	...	309
THOMAS H. T., Kelso	...	298
MURRAY, A., Glasgow	...	289
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SKINNER, J. J., Stirling	...	246

2,970 voting papers were issued; 746 were returned.

Guild of Public Pharmacists.—At a meeting of the Guild of Public Pharmacists on June 10 final approval was given to a Statistical Survey questionnaire drawn up for use in future negotiations with the Ministry of Health. It was emphasised that every member must fill in the answers to the questions and return them as soon as possible. A preliminary report from the subcommittee investigating the position of Group Pharmacists showed diversity in almost all aspects of the question.

LOCAL NEWS

South-eastern Federation Officers.—At the annual meeting of the Federation South-eastern Pharmacists' Association held at Lewes, Sussex, on June 8, the following officers were elected: *Chairman*, Mr. G. Checkley; *Treasurer*, Mr. D. Merchant; *Secretary*, Mr. H. John Seath, Carlisle Buildings, Eastbourne.

Hounslow Branch.—At the annual meeting of the Hounslow Branch of the Pharmaceutical Society recently, M. E. M. Bristowe (vice-chairman of the Branch) said "No longer is the apprentice the source of cheap labour or the employer at the mercy of an unscrupulous employer. Our aim, as a profession, is welfare of the human race."

First Lady Chairman of Branch.—The officers of the East Metropolitan Branch of the Pharmaceutical Society were recently elected as follows:—*Chairman*, Miss A. J. P. McBride; *Vice-chairman*, Messrs. L. H. Moppett and J. Reid; *Treasurer*, Mr. G. P. Bowen; *Secretary*, Mr. Stanley Robinson, 21 Broadhiel Avenue, Ilford. Miss McBride is the first lady chairman to be elected by the Branch.

Awards for Long Service.—Presentations for long service were made to the following members of the staff of Evans Medical Supplies, Ltd., recently:—Messrs. G. Shaw, B.Sc., Evans Biological Institute (twenty-five years); J. Gregson, d buyer, head office (twenty-five years); J. Cargill, London representative (four years) and G. R. Davies, representative Australia (twenty-five years).

IRISH NEWS

Statutory Committee.—The Statutory Committee of the Pharmaceutical Society of Northern Ireland will sit on July 9 to inquire into the case of a pharmaceutical company convicted of offence under the Dangerous Drugs Act.

Donegal Chemists Form Association.—At a meeting of chemists held in Stranorlar on June 5, the Donegal Chemists' Association was formed. Practically every town in the county was represented. Delegates from the West of Ireland Chemists' Association also attended and assistance to the new organisation. The following officers were elected: *Chairman*, Mr. D. Sweeney; *Treasurer*, Mr. L. Maguire; *Secretary*, Mr. J. F. Brady, The Diamond, Donegal.

TOPICAL REFLECTIONS

Representatives' Glasgow Agenda

Your report of the June Council meeting of the Pharmaceutical Society (pp. 762-63) mentions the decision to submit for discussion at the Branch Representatives' meeting in Glasgow in September: (1) The draft supplemental charter and consequent by-laws; (2) a report on the man-power situation. Both subjects have been under consideration by the Council longer than I, for one, would have thought necessary: there will be the more curiosity to see what has emerged. It is to be hoped that among the matters mentioned in the draft of the supplemental (or supplementary) charter will be regional representation on the Council. According to the latest Calendar of the Society that I have, the Council has power to make, subject to approval by the Privy Council, by-laws to regulate this or any method of electing councillors. Indeed, the Charter of 1843 enables the Council "from time to time" to vary alter or revoke [certain by-laws] and make such new and other by-laws as they shall think most useful and expedient so that the same be not repugnant to these presents or to the laws . . ." A proposed change in method of election to the Council should, I suggest, be mentioned in the new charter. If the branch representatives assembled at Glasgow decide that it is useful and expedient for regional representation to be introduced, the question will be whether the Council agrees with the decision. We must hope that there will be no stonewalling in that quarter. Like the draft supplemental charter, the report on the man-power situation has tarried. There may be a good reason: if so, we shall be glad to know it.

Patenting Medical Inventions

The latest ruling of the British Medical Association's Council regarding patenting of inventions evolved by medical men (p. 65) is, as you indicate, a departure from the position long maintained by that Council. Reports in your volumes for several years past have shown a consistent attitude

Tavistock Square on the question of enumerating members of the Association who might wish to patent an invention. Between the two world wars the idea of "dedicated" patents was publicised: these patents, of medical origin, were to be taken up by a neutral body which would work them for the benefit of the public. In 1931 (*C. & D.*, 1931.I.458) a Departmental

Committee on the Patents and Designs Acts expressed an opinion adverse to the B.M.A. Council's idea. The Committee held that an insufficient case had been made out for compulsory "dedication," and that such a change in procedure "would operate adversely to the British fine chemical industry, and discriminate unfairly against research workers." After nineteen years the Council has decided to ask medical inventors to assign patents to the National Research Development Corporation, a body set up under an Act of 1948. For an indefinite time the position regarding this class of inventions seems to have been a case of an irresistible force encountering an immovable mass.

A Leading Chemical Industry

The illustrated article on pp. 768-69 brings vividly before us the importance of the manufacture of alkalis. A predominance of fine chemicals in pharmaceutical practice tends to engender forgetfulness of the part played, in perhaps every walk of life, by the chemical industries typified by the factories of Widnes. The earliest reference to chemical manufacture on a substantial scale in this country is, I believe, found in an obituary notice in a London newspaper dated October 16, 1769, when a Mr. John White was praised as "the ingenious chemist, by whose study and industry the price of oil of vitriol and aqua fortis . . . was reduced, and who carried on the late great vitriol works at Twickenham." Much progress in chemical manufacture was unlikely, however, so long as the phlogiston theory held sway. Not till Lavoisier, near the end of the same century, put a few more pieces into the chemical jig-saw puzzle, did chemistry find a firm basis. A good account, in general terms, of this transformation is given in the eleventh chapter of Professor H. Butterfield's book (1949) on the origins of modern science. He stresses the fact that in Great Britain the revolution in chemistry occurred a century or more later than the revolution in mechanics and astronomy. The influence of Robert Boyle, great as it was, did not affect his successors as much as might have been expected. But important observations by Black, Priestley, Scheele and others continued to accumulate; and it is probable that without their contributions Lavoisier would not have effected his synthesis.

Xrayser

NEW COMPANIES

LEA VALLEY CHEMICALS, LTD. (P.C.).—Capital £1,000. To carry on the business of manufacturers of and dealers in chemicals, drugs, medicines, etc. Hyman Yarrow, and Ezra Shamash, directors. R.O.: 46 Finsbury Square, London, E.C.2.

RAVISSE, LTD. (P.C.).—Capital £100. To carry on the business of manufacturers of and dealers in cosmetics, toilet preparations, etc. Emrys G. Henry, John F. Miller and Kenneth L. Titmuss, directors. R.O.: 210 Capel House, New Broad Street, E.C.2.

TREVENA, LTD. (P.C.).—Capital £100. To carry on the business of exporters and importers of and dealers in perfumes and essences, soaps, ointments, powders and toilet requisites, etc. Peter Adam and Peret Saborsky, directors. R.O.: 9 Tokenhouse Yard, London, E.C.2.

MANUFACTURERS SUPPLY CO., WICKHAM, LTD. (P.C.).—Capital £1,000. To acquire the business of manufacturers of scientific instruments, pressed and blown glassware, vacuum containers, etc.; and technical consultants, now carried on at 19 Glebe Way, West Wickham, Kent, as Manufacturers Supply Co. Harry G. Flood and Lucy A. Eley, directors.

Company News

TAYLORS (CASH CHEMISTS) LONDON, LTD.—Net profit for 1949, after taxation, etc., amounted to £84,192, against £83,225 in 1948. Proposed dividend on preferred ordinary shares, less tax, £41,250 (£24,750); and on deferred ordinary shares, less tax, £13,750 (£8,250).

TAYLORS (CASH CHEMISTS) TRUST, LTD.—Group net profit for 1949, after taxation, amounted to £92,185, against £45,206 in 1948. Proposed dividend on preferred ordinary shares, 12½ per cent., £30,250, less tax (9.3 per cent., £22,500); and on deferred ordinary shares, £44,750 (£7,500).

TIMOTHY WHITES & TAYLORS, LTD.—Group net profit for 1949, after tax, etc., amounted to £335,668, against £331,867 in 1948. A final ordinary dividend is proposed of 20 per cent. actual, less tax (the same), £62,343, making 32½ per cent., less tax, for the year (the same). In a statement issued with the accounts the chairman says that retail salaries and wages have increased by 60 per cent. compared with 1946, and nearly 10 per cent. when compared with 1948.

LEGAL REPORTS

In Possession of Cannabis.—At Halesowen, Birmingham, court on June 13 Beresford Eric Leicester, a Jamaican, was fined £20 for being in possession of forty one packets of Indian hemp. An order was made for the drug to be destroyed.

Pharmacy Act Fines.—At Grimsby county magistrates' court, on May 23, fine totalling £15 10s., with £3 3s. cost, were imposed on Humphrey & Fisher, Ltd. chemists, High Street, Immingham, for selling a bottle of linctus containing morphine without a label giving seller's name and address.

Compulsory Winding-up.—In the Chancery Division, London, on June 12, an order was made for the compulsory winding up of Fifth Avenue Beauty Preparations Ltd., on the petition of the Commissioner of Customs and Excise. It was stated that the Commissioners had obtained judgment for the recovery of unpaid purchases tax, of which the balance due was £1,728. The paid up capital of the company was £100. There were no notices of opposition or support.

Application to Suspend Warrants.—Mr. J. Ludwin, drug store proprietor, Salmon Lane, London, E.14, applied at Bow county court, on June 16, for the suspension of warrants of execution issued by Optabs, Ltd., Bradford (£29); Rodmell Chemical Co., Ltd., Liverpool (£23); and Martin Brent, Ltd., Wembley, Middlesex (£10), offering to pay the debts at the rate of £3, £2 and £2 a month, respectively. The debts were in respect of chemists' sundries. The applications were allowed in respect of the first two creditors, but refused in respect of Martin Brent, Ltd.

COMING EVENTS

Tuesday, June 27

EAST METROPOLITAN BRANCH, PHARMACEUTICA SOCIETY, Stratford Church Institute, 27 Romford Road, London, E.15, at 8 p.m. Mr. H. Coulson, M.P.S., on "The Cut in Oncost."

Wednesday, June 28

WALLASEY PHARMACISTS' ASSOCIATION. Queen Arms Hotel, Liscard, at 2 p.m. Annual outing to Trentham Gardens. Ticket, 15s.

Thursday, June 29

HARROW BRANCH, PHARMACEUTICAL SOCIETY, Oak Hall, Baptist Church Hall, College Road, Harrow, at 7.30 p.m. Annual meeting. Mr. M. C. Islip (a member of Society's Council) on "The Work of a Council Member."

LONDON CHEMISTS' GOLFING SOCIETY, Bush Hill Park Golf Club. Captain's day.

TRADE NOTES

Corrigendum.—It is regretted that on a few copies the inscriptions of the two illustrations on p. 830 have been transposed.

Closed for Stocktaking.—C. J. Hewlett & Son, Ltd., 35 Charlotte Road, London, W.C.2, state that their warehouse will be closed for stocktaking on July 3, 4 and 5, when urgent orders only will be executed.

Combination Pack.—A combined pack representing a nebuliser and 15-mil bottle of supren adrenaline derivative is issued for asthmatic patients by Bayer Products, Ltd., Africa House, Kingsway, London, W.C.2.

New Perfumes.—F. W. Hampshire & Co., Ltd., Sunnydale, Derby, parent company of Jean Pierre perfumes, announce that two entirely new creations Gay Debut and Cocktail Time are being introduced on the English Market.

Change of Pack.—Prentif, Ltd., Long's Court, St. Martin's Street, London, W.C.2, draw attention of pharmacists to a change of pack of their Prentif surgical lubricant, now appears in a blue carton in place of the previous red and white.

Blackcurrant Syrup.—Niagara brand blackcurrant syrup is manufactured under the auspices of the Ministry of Food by Arnett & Foster, Ltd., Eagle Wharf Road, London, N.1, and issued in cartons of one oz. bottles, as illustrated in the company's announcement on another page.

Price List Delay.—Ward, Blenkinsop & Co., Ltd., 6 Henrietta Place, London, W.1, state that there will be a slight delay in dispatching their 1950-51 price list (to which attention is drawn on another page of this issue) owing to a fire in the printing works in which it is being produced.

Taxability of Wrapping Papers.—MacDonald & Son, Ltd., Hope Mills, Pollard Street, Manchester, 4, point out that the purchase tax on wrapping paper mentioned in the company's announcement in the C. & D., June 17 issue refers only to flat sizes.

Bonus Offers.—Details of bonus offers Nivea creme by HERTS PHARMACEUTICALS, LTD., Welwyn Garden City and of Linda films by PANDA FILM CO., 75 Avondale Road, Bromley, Kent, are deserving of study by chemists.—PHARMACEUTICAL LABORATORIES GEIGY, LTD., National Buildings, Parsonage, Manchester, 3, give details on another page of a bonus offer to produce Steroxin ointment for wounds.

Self-cleaning Sanitary Fluid.—Racasan, Ltd., Cromwell Road, Ellesmere Port, Ches., are the manufacturers of Racasan sanitary fluid, which they claim makes possible odourless sanitation in confined spaces such as caravans, country cottages, etc., by breaking down faecal matter leaving no oily film or greasy scum.

Change of Title.—From July 3, aluminium hydroxide gel (Granwood) will be supplied under its newly registered trade name Phalina. The sizes remain at 8 and 80 fl. oz., but the retail price of the 8-oz. bottle is reduced. Stocks of the 8-oz. size unsold on July 3 will be exchanged for the new pack until July 22 by the manufacturers, Granville, Wood & Co., Ltd., Ascot Street, Oldham.

In New Containers.—JOHN MORRELL & CO., LTD., Liverpool and London, announce that plentiful supplies of Red Heart canned dog food are available in a new $\frac{1}{2}$ -lb. aluminium container.—Flit insecticide, now in a "bright new tin" illustrated on another page, is being extensively advertised by the manufacturers, STEMCO, LTD., 128 Albert Street, Camden Town, London, N.W.1.

"Balanced" Feed for Infants.—Cow & Gate, Ltd., Guildford, Surrey, have introduced Modified Lacidac, a dried milk powder to which lactic acid has been added and which is further modified by the addition of the carbohydrates dextrin, dextrose and cane sugar. Modified Lacidac is made in two strengths: Half-cream No. 1 (calorie value 20 per oz.) and full-cream No. 2 (calorie value 24 per oz.). It is put forward as being particularly valuable for underweight and marasmic babies, premature infants and those recovering from gastro-enteritis.



Showroom of James Taylor (Trongate), Ltd.
132 Trongate, Glasgow (see p. 828)

THE WEEK IN PARLIAMENT

ON June 16, MR. W. T. WILLIAMS, on a private members' motion, moved that the House welcomed the report of the Committee on Resale Price Maintenance and urged the Government to take all action open to it to deal with the problem. The motion was passed by 142 votes to 124. An Opposition amendment declaring that resale price maintenance had a valuable function under proper safeguards in "the complicated structure of modern economic society," and that resale price problems over the whole range of industry, whether nationally or privately owned, should be handled by the monopolies commission, was defeated. The principal speakers taking part in the discussion were MESSRS. P. DAINES, H. N. LINSTEAD, and J. RODGERS, CAPTAIN W. J. FIELD and MR. HAROLD WILSON (President of the Board of Trade). A fuller report of the debate will be published next week.

Soap Supplies

On June 14, MR. J. HARRISON asked the Minister of Food if he would increase the supplies of soap to householders before considering derationing. MR. MAURICE WEBB said his decision about the derationing of soap would be made on the test of what was best in the public interest.

Hairdressers' Petition

In private business on June 15, MR. R. S. RUSSELL presented a petition that hairdressers should be included among new traders to whom facilities were granted for the sale of soap.

B.C.G. Experiment

On June 15, MR. ANEURIN BEVAN (Minister of Health) assured MR. J. W. SNOW that he would examine the controlled experiment in the use of B.C.G. vaccine conducted in Portsmouth over the past four years, if he was supplied with particulars. On the same day, MR. R. H. TURTON asked the Lord President of the Council (Mr. Herbert Morrison) if he was aware that some 300 people suffering from muscular dystrophy had been told that the disease was incurable, whereas in some cases a cure had been effected. As there was a great lack of knowledge about the disease would he encourage the medical profession to institute further research into the matter. MR. MORRISON: Certainly, we will do all we can in the matter.

"ONCOST" CONFERENCE

REPRESENTATIVES of Pharmaceutical Committees met in London on June 15 at a conference called by the National Pharmaceutical Union Executive. The Conference passed resolutions approving and endorsing the action of the Central N.H.S. Committee in all the circumstances leading to the Minister's amended decision to make the oncost cut provisional only; demanding amendment of the regulations so that the terms of the contract should become alterable only after full consultation by the Minister with the representatives of the chemist-contractors; rejecting the arguments for reduced oncost percentage put forward by the management side of the Pharmaceutical Whitley Council; and re-adopting the present negotiating bodies as spokesmen for the contractors. A full report of the proceedings will be given later.

BIRTHS

DILLEY.—At Suffolk House, Stanmore Middlesex, on June 15, Josephine (née Heath), wife of Gordon Dilley, Ph.C. (member of the editorial staff of THE CHEMIST AND DRUGGIST), of a son (Edward George).

KINNIBURGH.—At Foresterhill, Aberdeen, on June 4, Kitty (née Moore), wife of Hugh N. P. Kinnburgh, B.Sc., Ph.C. Pharmaceutical Department, Royal Infirmary, Aberdeen, of a son.

Ross.—At Rubislaw nursing home, Aberdeen, on June 8, Jess (née Johnston), wife of Morris Ross, M.P.S., North Burrowside Street, Carnoustie, of a daughter.

MARRIAGES

FRYER—Fox.—At David Lane Methodist Church, Nottingham, on June 19, Gordon Walter Fryer, Great Gonerby, Grantham, Lincs, to Edith Barbara Fox, Ph.C. chief pharmacist, The Hospital for Women, Peel Street, Nottingham.

DEATHS

CRELLIN.—On May 23, Mr. William Clarke Clive Crellin, M.P.S., 97 Woolton Road, Wavertree, Liverpool, 15. Mr. Crellin qualified in 1920.

JACOBSEN.—On June 3, Mr. Leslie Jacobson, M.P.S., 11 Church Road North, Liverpool, 15, aged twenty-five.

RUSSELL.—On June 5, Mr. Simon Russell, M.P.S., 11 Upper Mulgrave Road, Cheam, Surrey, aged fifty-nine.

PERSONALITIES

MR. ROBERT GRAHAM, M.P.S., F.C.S., resident director at T. & H. Smith, Ltd., at 32 Virginia Street, Glasgow, C.2 (see p. 828), qualified in 1900. He writes that he has spent almost fifty years with the company and that "every year adds to the happiness of my association with it."

MR. GEORGE CAIRNS, M.P.S., Hawick, has been elected president of Hawick Rotary Club.

MR. W. WOOD WILSON, M.P.S., an illustration of whose Glasgow business appears on p. 826 of this issue, entered upon his pharmaceutical apprenticeship in 1888 and qualified in 1893. He served a two-year term as president of the Glasgow Pharmacy Club and was captain of its golf section, 1921-22. In Freemasonry, he is a founder member of the Galen Lodge, No. 1284.

MR. PETER SHIELDS, M.P.S., manager of W. & R. Hatrick, Ltd., Renfield Street, Glasgow (see p. 827), entered the service of the company in 1912. Mr. Shields served with the Armed Forces in the 1914-18 war and qualified in 1920. For the greater part of the time since then he has been engaged in manufacture in the company's laboratory, "with interim periods on the road." He succeeded to his present post in 1947.

MR. H. J. STRAUSZ, M.A., F.R.I.C., author of a review of perfumery materials on pp. 847-49, was for many years an authority in the Continental perfumery and cosmetic industry. A Hungarian born Briton, Dr. Strausz established himself in 1939 in London as an independent consultant to leading French and English manu-

facturers of perfumes and cosmetics. He read a paper on chemical aspects of the ageing of essential oils and maturing of perfumes before the International Chemistry Congress in London in 1947, and is co-author of the recently published reference book "Synthetic Perfumes."

MR. GEORGE R. MILNE, Ph.C., the Deputy Director since 1947 of the Glasgow and West of Scotland Blood Transfusion Service, which is referred to on p. 826, served his apprenticeship with the late Mr. Anthony McMillan, Glasgow, qualified as a chemist and druggist in 1930 and passed the Pharmaceutical Chemist examination the following year. He was then appointed research assistant to the late Professor Ralph Stockman in the *materia medica* department of Glasgow University. He next joined the staff of the Royal Technical College, Glasgow, where he was lecturer in pharmaceuticals for about thirteen years. During the 1939-45 war he was responsible, under Professor J. P. Todd, for the development of the Blood Transfusion and Saline Infusion Fluid Services centred on Glasgow.



BUSINESS CHANGES

MISS FIONNUALA E. HUGHES, M.P.S., has acquired the Dawson Pharmacy, 238 Dawson Street, Dublin.

THE ASSOCIATION OF BRITISH PHARMACEUTICAL INDUSTRY has appointed Mr. Gordon M. L. Smith, B.A., as secretary of the Association from September 1.

HARKER STAGG, LTD., Emmott Street, London, E.1, have appointed Mr. B. Aperios as their representative in Kent and Sussex.

MR. E. C. LAMPARD, M.P.S., has acquired the pharmacy at 4 Park Street, Bristol, formerly known as King & King (Chemists), Ltd.

BORAX CONSOLIDATED, LTD., are removing on June 26 to their pre-war offices at Regis House, King William Street, London, E.C.4 (Telephone: Avenue 7333).



Mr. Robert Graham





Brothers in Pharmacy

THE BRITISH CHEMIST AND
THE AMERICAN DRUGGIST

By John W. McPherrin

EDITOR, "AMERICAN DRUGGIST"

AFTER five weeks in England, Scotland, and Wales, I came back to America with great admiration and respect for the British people. Deep in our hearts, the Britons and the Americans are the same kind of folk. Under different conditions, we have acquired some different habits of thinking and doing, but we seem to express the same characteristics, the same hopes, and the same heartaches in achieving them.

For example, I found that the British chemist is much like his American colleague. Both want more public recognition of pharmacy as an important profession, and both feel the need for more united action by the various pharmaceutical organisations in each country. In addition, British and American pharmacists share some of the same economic problems. Like the American pharmacist, the British chemist must do other things than fill prescriptions in order to make a living. It appears that the average British chemist gets something less than 25 per cent. of his total income from prescription business, even under the National Health Service. For the average American pharmacist the proportion for all 55,000 pharmacies, including the 38,000 that have soda fountains, is 15 per cent.

Soda Fountains

Many British chemists with whom I talked last year were under the impression that all American pharmacies or drug stores were largely engaged in the soda fountain business. In fact, the average store does only 15 per cent. of its volume in soda fountain business. In other words, the prescription department is no less important than the soda fountain in the average American drug store.

Moreover, not all American drug stores have soda fountains. About one-third do not. Less than half of the soda fountains

in drug stores serve lunches, and the great majority serve only soft drinks and ice cream. There is no regular hour for morning coffee in America, but in many communities the druggists' customers, including doctors and nurses, drop in for a cup of coffee during the morning. We have at least 17,000 pharmacies which have no fountains, and they are not unlike the 15,000 chemist shops of Britain. In addition to operating a prescription department, they handle cosmetics and toiletries advertised remedies, first-aid supplies, and an assortment of sundries. In the approximately 17,000 American drug stores without soda fountains, prescription volume is comparable with that of the British chemist, as the following table shows:—

Prescriptions	...	...	22 per cent.
Cosmetics and toiletries	...	25	per cent.
Advertised remedies and sundries		40	per cent.
Candy and miscellaneous	...	13	per cent.

Further, it is estimated that in the United States there are over 2,000 strictly "professional pharmacies" that limit their activities to the filling of prescriptions and sale of sick-room supplies. These stores are similar to the strictly professional chemist shops of Great Britain. Some of them show their high respect for the British chemist by referring to themselves as "chemists" instead of as pharmacists. Incidentally, we use the term "druggist" in America to designate a pharmacist who has the responsibility of owning or managing a drug store, and in most States the term "pharmacy" or "drug store" can legally be used only when the establishment is authorised by law to fill prescriptions. In addition to the 55,000 authorised drug stores, America has about 2,500 other stores (usually called "Pineboard stores") which sell cosmetics, toiletries, advertised remedies, etc. They cannot fill prescriptions and are not allowed to use the term "pharmacy" or "drug store."

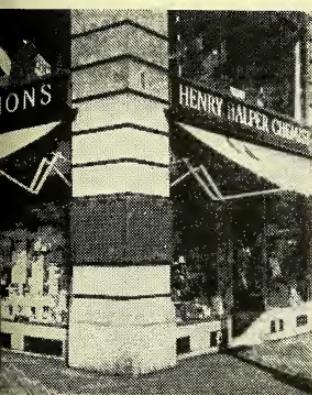
SHOPFITTING STYLES IN U.S. PHARMACIES



New York City drug store with semi-open dispensary, architect-designed fixtures, and partly concealed lighting.



Stone, glass and shrubs combine to give a distinctive appearance to this California pharmacy. The small show cases may be removed to give open-front effect. The white facia is set well back.



Conservatism is the keynote in this Madison Avenue, New York, store. Fixtures are in dark woods and marble.



Clearly sign-posted departments are here combined with direct and indirect lighting. The floor is of asphalt tiles. Showcases guide the customer round the shop, past displays of goods.



Plate-glass front without backing puts the whole shop into a show window. The store has three entrances.



Glass, used structurally as well as decoratively, is extensively used in American drug stores. In the example shown, maroon and grey "carrara" glass is used with glass doors.

In 1947, it was estimated that the average volume for all 55,000 drug stores (with or without a soda fountain) was \$66,000 per year, and \$10,000 (15 per cent.) of this was prescription volume. Since the average prescription price in America is \$1.50, it can be assumed that the average American pharmacist operating his own drug store will fill about 6,600 prescriptions a year. The size and character of this American volume of prescriptions (during the past ten years the number has more than doubled, and the average value risen from 90c.) indicates why the American pharmacists are not as favourable to Government control of medicine as some of the British chemists. A national survey made by "American Druggist" a year ago showed that over 80 per cent. of the pharmacists were opposed to compulsory health insurance. Another reason is that the American pharmacist has never had to contend with as many dispensing doctors as has the English chemist. I understand that in England, prior to N.H.S., 70 per cent. of the dispensing was done by the doctors. Of course, as my Scottish friends proudly told me, that was not true in Scotland. In America, less than 25 per cent. of all prescriptions are dispensed by doctors, mostly in the smaller towns.

Proprietaries on Prescription

Among some British chemists and some association officials I noticed antagonism towards the prescribing of proprietaries. Over 60 per cent. of American prescriptions require a proprietary speciality of some kind. Most American pharmacists are aware that their great increase in prescription volume during the past ten years has been due to the rapid development and promotion of new pharmaceutical specialities. In fact, over 50 per cent. of the prescriptions now being filled in America call for ingredients or products that did not exist ten years ago. Some American pharmacists who at first resisted the development of packaged pharmaceutical specialities now admit that they could not possibly fill all prescriptions if they had to take the time to compound each one. Because a good pharmacist in America costs from \$75 to \$100 a week, the time required to prepare a prescription is important. Since only 25 per cent. of the prescriptions require actual compounding, the average pharmacist can turn out fifty prescriptions a day.

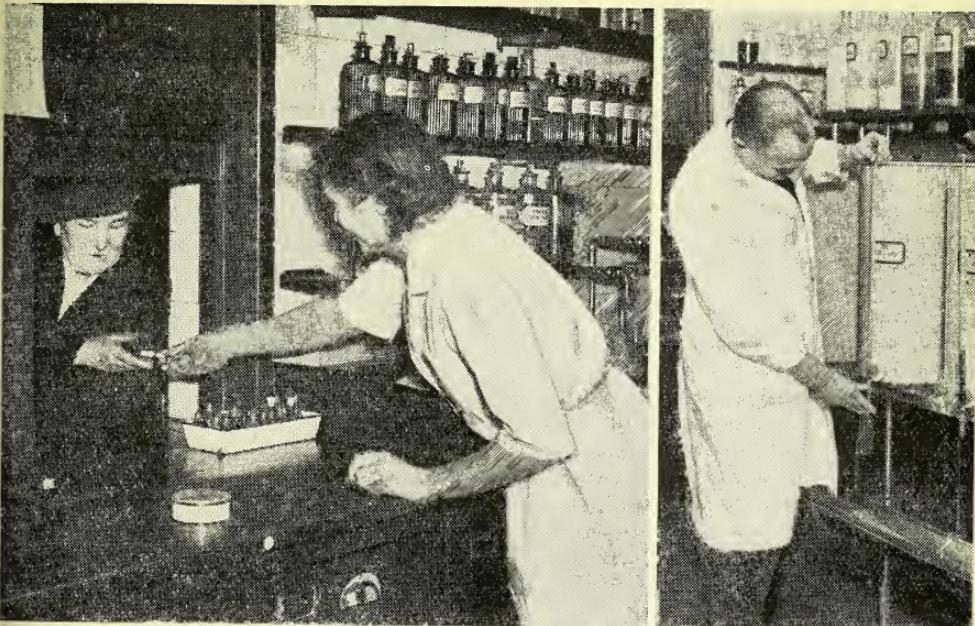
Some British chemists told me they thought America was over-run by chain drug stores, and that independent pharmacists had been forced by the chain store into sandwich-making and out of the prescription business. The facts are that there were soda fountains in independent drug stores long before there were any chain drug stores. In Great Britain, it is my understanding that 20 per cent. of chemist shops are multiple stores. In all America we have only 4,000 chain drug stores. In other words, in America there are at least ten independent stores to every chain store. In Great Britain, there are, I believe, only four independent chemist shops to every multiple.

Perhaps one reason why our independent pharmacists in America have stronger position against the chains or multiples is that they compete more aggressively. They do not believe that it is sin to suggest and sell cosmetics, sundries etc. And they do it without offence.

Pharmaceutical Organisations

The subject of pharmaceutical associations is interesting because there are many points on which the situations are similar. The American Pharmaceutical Association, like the Pharmaceutical Society of Great Britain, speaks for the profession of pharmacy wherever it is practised. The commercial side of pharmacy in America is represented by the National Association of Retail Drug Stores. The Pharmaceutical Society of Great Britain has much more power than the American Pharmaceutical Association, membership of which is voluntary. It is possible for a pharmacist to practise his profession without belonging to the Pharmaceutical Association, providing he has the required education and is able to pass the legal examination in pharmacy.

The National Pharmaceutical Union differs from the National Association of Retail Druggists in the scope of its operations. The British organisation provides many more services (such as insurance) than does its American counterpart. Comment on the Association angle of organisation in the United States would not be complete if I did not refer to the forty-eight State Pharmaceutical Associations. The fact that America is a nation of forty-eight States, each proud of its State rights makes it necessary for America to do things differently than Great Britain.



Before N.H.S., seven service hatches were in use at Guy's; today, only three are called for. Stock mixtures are used, though less than formerly. A glass depth tube shows when to refill.

Pharmacy Today in a Teaching Hospital

How has it fared under the impact of the National Health Service?

RECONSTRUCTED in 1938-39, the pharmacy department of Guy's hospital was admirably adapted to the needs of the period. The chief pharmacist, Mr. John Moore, Ph.C., with six years' experience of the department behind him, had had a hand—and a fairly free hand—in its planning. Many attractive built-in features owed themselves to the ideas he or his staff had put forward.

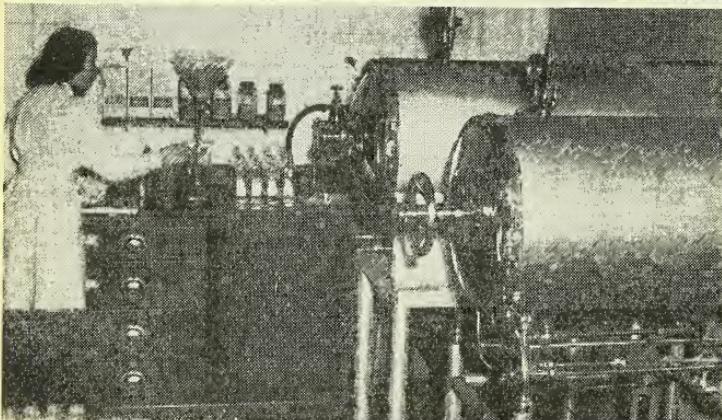
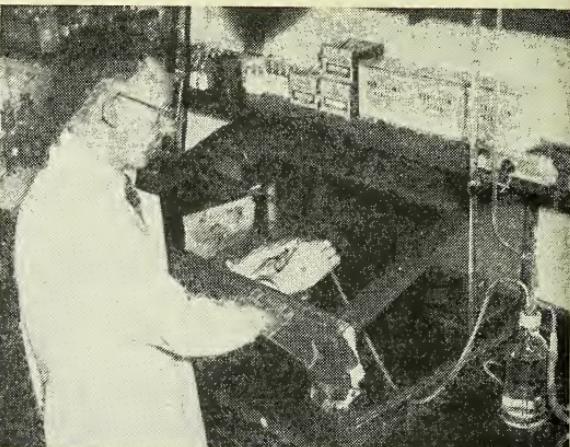
Subsequent changes in the pattern of work in the department have been influenced by three main factors — the war, pharmaceutical progress, and the National Health Service. What have been the effects of each? And in particular, have the pharmacists of the teaching hospitals tended to become removed from the main stream?

Superficially the rhythm of Guy's pharmacy department goes on much as before. Each morning the requirements of the wards (there are 550 occupied beds in the hospital and a total complement of 730) are sent down in baskets, with the "empties." During the morning they are made up and at mid-day they are returned. The afternoon is taken up mainly

in dispensing new prescriptions for inpatients and in replenishing tomorrow's stocks. Out-patient work is continuous from 9 a.m. to 5 p.m., and even after.

But look again. Only one of those outpatients' hatches is in use. Five were provided. Sometimes a second may be pressed into service, but three are not now used. Present "out-patient" figures are not available but the closed hatches tell their tale. In 1947 360,000 out-patients were served.

The shrinkage of out-patient dispensing has proved a blessing in another direction. Without the space it freed for internal rearrangement there would have been little possibility of enlarging the sterilisation department, which now has a much enhanced importance. It accommodates two horizontal autoclaves and an electric sterilising oven and has a staff of two pharmacists and a technician. The sterile section was established in 1932 but for years was quite small. Its enlargement became necessary to cope with a great increase in injection therapy, especially during and since the war. In 1949 the total of injection solutions prepared in the department reached 16,517 litres. Ampoules were filled to a total of 35,000, and in addition, 30,000 mega units of penicillin and 7,000 mega



3. Built-in devices include a rack for 7-lb. ointment jars, complete with cover.

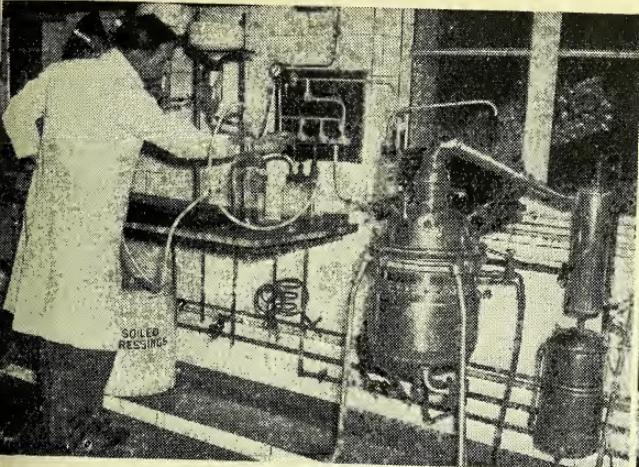
4. A burette in closed circuit connected to an air pump delivers sterile solvent for preparations to be made aseptically.

5. Space for enlarged sterile dispensary was liberated by reduced demand for out-patient dispensing.

units of streptomycin were used on patients. Even in the dispensary itself the work is not the same as of yore. Treatment of patients is today more positive and dispensing work more interesting on that account. Gone are the chronic sick with their endless "Rep. mist." prescriptions. More and more out-patients, after their early visits, are being referred back to their general practitioner under N.H.S. with recommendations as to treatment. Stock mixtures are less in use, and tablets, capsules and injections are in greatly increased currency—perhaps in proportion to the reduced use of mixtures. More work falls today, too, on the manufacturing laboratory, situated in the basement. At Guy's, manufacturing has always been looked upon as important, and most of the galenicals used in the hospital are made in it. In the 1870's, Gerrard's lead plaster had more than a hospital-wide reputation. It was named after A. W. Ger-

Birmingham. Gerrard is believed to have been, indeed, the first pharmacist, as such, to be appointed to any hospital in the country. Previously all had been "apothecaries," and they continued to be so-called until fairly recent times. Equipment today includes a single-punch tablet machine, homogeniser, disintegrator and continuous still with an output of 15-20 gall. per hour. Liquid preparations for internal use made in the laboratory in 1949 totalled 3,299 gall. They included liquid extracts, 14 gall.; tinctures, 86 gall.; syrups, 181 gall. Output of disinfectants, lotions, etc., for external use, totalled 12,939 gall.

The last occasion on which the *C. & D.* dealt with the work of Guy's pharmacy department was in 1925, when totals were given of a number of materials supplied through the dispensary. Strictly comparable figures are not available for all items, but the following table may throw some



6. The manufacturing laboratory provides scope or ingenuity, as in the vacuum manifold shown, which was constructed from the discarded material of another department.

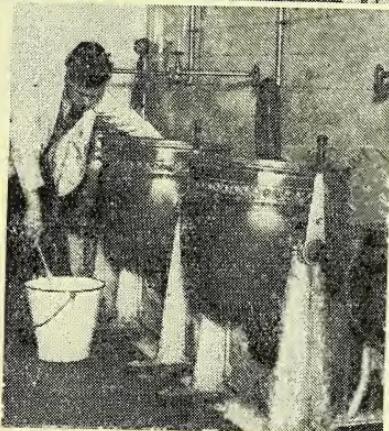
(Adjoining). Most of the analenicals used at Guy's are made in the hospital.

Ancient treasures may survive though new techniques replace old. The iron mortar is still in occasional use.

ight on the changes that have taken place in pharmacy in a quarter of a century.

ITEM	1923	1949
auze	5,280,000 yd.	150,000 yd.
ndages	324,432	48,960
tract of malt	160 cwt.	37 cwt.
od-liver oil	250 gall.	30 gall.
ulin	150,000 units	758,000 units
ixtures and emulsions	11,000 gall.	990 gall.
ntments	4,480 lb.	4,257 lb.
blets	7½ cwt.	2,773,000

The staff of the department comprises the chief pharmacist, a deputy chief pharmacist, two senior pharmacists, five pharmacists, one Apothecaries' Hall dispenser, three laboratory assistants and technicians, a storekeeper, a clerk and two porters. The first "chief pharmacist"—under that title—was Mr. Horace Finnemore (1901-19), who left to take up an appointment as head of the pharmacy department, University



of Sydney, Australia (he recently retired from that post and returned to settle again permanently in this country). Mr. Finnemore's place at Guy's was taken by Mr. Williamson (1919-32). Research work to the credit of the department includes a published assay on ascorbic acid, and work on a suspension of barium sulphate. An apparatus for the aseptic filling of penicillin solvent under positive pressure was devised in the department and a description of it has also been published.

It may be too early to come to any general conclusions about the final relationship of Guy's, or any other teaching hospital, to the health services of the country as a whole. It would appear that, at present, the changes due to N.H.S. are less drastic than others brought about by technical and scientific processes. The sending back of out-patients to their home doctors may tend to promote contacts between hospital pharmacists and pharmacist-contractors under N.H.S. That would be all to the good of the craft. Mainly, however, the internal affairs of the hospital look like continuing to be the principal preoccupation of the department.

CHEMISTS IN THE AUSTRALIAN HEALTH SCHEME

Australian pharmaceutical politics reviewed by Mr. Keith Attiwill
(Director, Australian Pharmaceutical Public Relations Secretariat)

PHARMACY in Australia has organised itself to an extent that has won unstinted praise from inside and outside the profession. Its main concern today is to ensure a proper place for itself in the changing pattern of the Australian national health policy. To do this it must justify its claim to be regarded by the politicians, the Press, and the people as an essential part of the "health team." This it is striving to do, with a fair measure of success, through the activities of its own Federal Public Relations Secretariat, of which Mr. Ivan J.

Thompson, Melbourne, is chairman.

Established in 1947, the Secretariat is responsible for promoting the interests of pharmacy by every practicable means, and it assists the Associated Pharmaceutical Organisations of Australia to implement their fundamental policies and integrate their activities. Bearing the brunt of the battle for existence for retail pharmacy is the Federated Pharmaceutical Service Guild of Australia, an organisation representing nearly 96 per cent. of the 3,000 master chemists in the Commonwealth.

Health Plans in Melting-pot

The defeat of the Labour Government at the general election in December 1949 threw two major health plans into the melting-pot. They are the Pharmaceutical Benefits Act and the National Health Service Act, passed while that Government was in office, against opposition from the medical and pharmaceutical professions. After five years of negotiating with the Commonwealth Health Department and Treasury experts the chemists by plebiscite authorised the Guild (their negotiating body) to make an arrangement under which the chemists would dispense Government prescriptions. The terms and conditions were fairly satisfactory. The Pharmaceutical Benefits Act provided for

a Commonwealth Pharmaceutical Formulary (C.P.F.) and every item therein was pre-costed on the basis of an estimated incidence of 19.6 million prescriptions when the pharmaceutical benefits service came into full operation. The Service began in June 1948.

The Federal Council of the British Medical Association in Australia advised its members not to co-operate, because it objected to several clauses. A long fight ensued. Eventually, in an attempt to coerce the doctors into the Service, the Labour Government forced through an amendment of the Act. It then became an offence for a doctor to prescribe any medicine contained in the C.P.F. other than on a Government form. The Act was successfully challenged by the B.M.A. in the High Court of Australia, the Court upholding the contention that the Amendment was *ultra vires* the Constitution.

B.M.A. Activities

By that momentous decision, announced shortly before the general election, the B.M.A.'s objections to the Act were reduced to three main points: the formulary, the prescription forms, and the penalty clauses. The Association thereupon circulated a booklet containing a detailed plan for a comprehensive health service aimed at (1) maintenance of health; (2) prevention of disease; and (3) cure of disease. The Association contended that the Labour party had begun wrongly by initiating its national health scheme with the supply of medicines. Though the people had decided by referendum that the Commonwealth should have power to legislate for a pharmaceutical benefits service, there was little or no outcry when the doctors stood solidly behind the B.M.A. and refused to sign the

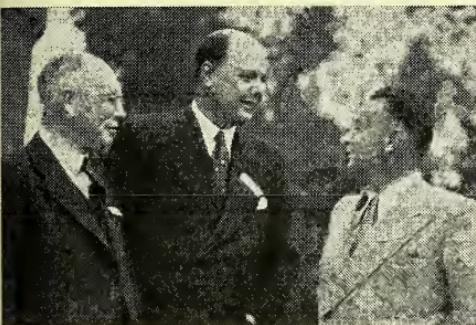


Mr. K. G. Attiwill



Mr. A. W. McGibbons,
first Federal President
(1928-47), Federated Phar-
maceutical Service Guild.

Government prescription forms. In a few areas in all States, where doctors were signing the forms, however, there was a fairly large incidence of Pharmaceutical Benefits Act dispensing. At the end of February 1950, 174 of Australia's 5,500 doctors were signing P.B.A. forms, and about 40,000 prescriptions a month were being dispensed. When the new Government — a composite Ministry of



Messrs. V. G. Morieson (Federal president, Federal Council of Pharmaceutical Societies of Australia); Leonard Long (president, Pharmaceutical Society of Victoria); and W. R. Cutler (president-elect, Pharmaceutical Association of Australia and New Zealand, and New South Wales representative on the Federal Council of Pharmaceutical Societies).

Liberal and Country party members, led by Mr. Menzies — assumed office, Sir Earle Page became Minister for Health. Over seventy years old, he was a leading surgeon before he entered politics, and has represented his constituency continuously for thirty years. Sir Earle Page enthusiastically embraced the B.M.A. policy, which included scrapping the C.P.F. and substituting a list of about forty "life-saving and maintaining" drugs. During a series of separate conferences in January with the B.M.A., the Pharmaceutical Guild, and the Friendly Societies, he told chemists that he would value their co-operation.

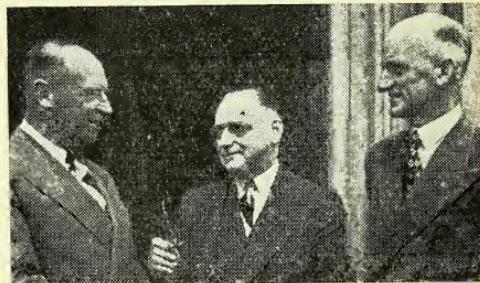
Fears for "Family Chemist"

The Guild had good reason to fear that, by reason of the Minister's desire to encourage existing voluntary schemes of medical benefit, the Friendly Societies with their lodges and satellite dispensaries might be elevated at the expense of retail pharmacy. The Friendly Societies' dispensaries have expanded wherever possible on the chain pharmacy principle, and exemption from income tax, land tax and stamp duty has helped them to compete

on advantageous terms against the family chemist. The Federal President of the Guild (Mr. Eric Scott) therefore told Sir Earle Page that the Guild could not promise to co-operate in the Government's proposals until it had received "acceptable assurances" that the *status quo* of the private chemists would be maintained. At the time of writing this article (April 14) no such assurances had been given. Nevertheless, during a Press campaign by the Pharmacy Public Relations Secretariat to attempt to obtain the desired assurances, the Prime Minister (Mr. Menzies) declared that Sir Earle Page's talks were "merely exploratory," and that no plan was before the Cabinet. It is assumed that that is the situation today.

Payment

The Guild is opposed to any policy that provides for the distribution of Government benefits (whether medical treatment, hospital care, or the provision of drugs or medicines) through institutions on a basis



The Federal Executive of the Federated Pharmaceutical Service Guild of Australia. Left to right: Messrs Eric Scott (president); O. C. V. Leggo (treasurer) and G. H. Dallimore (deputy president) also president, West Australian Branch of the Guild.

that would make them, and not the Government, the chemists' paymasters. There is an increasing support in the Government parties for the view that the King's bounty should be distributed directly by the King's servants, and not through sectional bodies outside the immediate control of Parliament. The B.M.A. demand payment on a fee-for-service basis; the Friendly Societies protest that they could not afford it. By taxation, a fund of more than £A100 million has been amassed to provide for the national health and medicine service, and the fund is growing every week, taxpayers paying a social service contribution as part of their pay-as-you-earn Federal income tax.

Prospects for Newcomers

The future of pharmacy in Australia is still obscure, but such is the background against which the inquiring British pharmacist may ponder the prospects of settling in Australia. Speaking generally, they are good for the pharmacist with reasonable capital who desires to establish his own business, and who is willing to work hard and show enterprise. Turnovers are high and in some cases increasing, but net profits are disproportionate owing to high cost of stock, high taxation, high wages, and the general upward spiral of living costs. There is at the present time an acute shortage of qualified and even unqualified help. With an immigration policy to increase the population of Australia to 12 or 14 millions in the near future, the shortage may be apparent for some time. Yet the number of pharmacy students in the Australian teaching institutions is unprecedentedly high, and in the opinion of some observers will overcome the shortage of qualified chemists in two years or so.

The trend in the Australian capital cities is toward larger pharmacies. Under a national medical and pharmaceutical service, with the customer having freedom of choice of chemist, it would become increasingly difficult for the one-man pharmacy to cope with the expected flow of prescriptions.

Throughout the country, chemists enjoy invariably a high standing in their town or district. There is much to commend a young and growing country town, or even an old-established one, to the new young master pharmacist.

Facts supplied by the Pharmaceutical Societies of the six States show that, in the past few years, about seventy British pharmacists have been registered in Australia under reciprocal agreement. Most of them are now well established. The usual process is to begin as a registered assistant and to buy a pharmacy after a process of acclimatisation. The first point of inquiry in Australia might well be the Pharmacy Board in the State concerned [see *The Chemist and Druggist Diary and Year Book*, 1950, p. 414].

Voluntary Work

It is not possible within the compass of this article to mention in detail the effective and constant work of the Pharmaceutical Association of Australia and New Zealand; the six State Pharmaceutical Societies with their recently-formed Federal

Council; the Pharmacy Boards; the Student organisations; and the Society of Hospital Pharmacists. A conspicuous feature of official pharmacy in Australia is the unremitting and onerous work undertaken voluntarily by the committees in the cause of the profession. The Guild is the master pharmacists' organisation and the official pharmaceutical negotiating body for retail pharmacy. It has entered into numerous contracts with manufacturers for "chemist only" lines and has sponsored the Gilseal range of merchandise, through its own efficient merchandising department. It is perhaps inevitable, especially in the national health negotiations, that the limelight should fall upon the Guild; but neither Guild nor the Public Relations Secretariat could function successfully without the generous support of the State Branches of the Guild and of the Societies and associated bodies.

Pharmacy is well organised in Australia. Consequently Australian pharmacists, though by no means complacent, do not fear that they will be by-passed by the architects of the new order on the health front.

THRIVING ON POISONS

ONE of the short stories in "The Twilight of the Gods," a book by Dr. Richard Garnett first published in 1888 and lately reprinted, is entitled "The Poison Maid." The name of the heroine, Mithridata, is reminiscent of an electuary once famed as an antidote to poisons of all kinds. This remarkable young person was the daughter of a magician, who fed her from childhood on graduated quantities of "arsenic, strichnine, opium, and prussic acid." Her mother died soon after the child was born, and no other human being entered the house. However, under this unusual regimen "she had thriven... marvellously, and was without a peer for beauty, sense and goodness." The time came when she read that the substances on which she had been reared were lethal. A question to her father brought the reply that the statement was true, and that she had been thus nourished for a definite purpose. The magician, bearing a grudge against the king of the country, planned to send his daughter to the capital, where the heir to the throne would "infallibly" fall in love with her. So saturated with poisons was the girl that her touch would be fatal to a lover. On refusing to become an accomplice in her father's plot, Mithridata was turned out of the house.

THE PHARMACEUTICAL SOCIETY OF IRELAND: ITS ORIGIN AND EARLY DEVELOPMENT

By James G. Coleman, M.P.S.I. (Secretary and Registrar of the Society)

EXACTLY seventy-five years ago the draft of the Pharmacy Act, 1875, was published. Official pharmacy in Ireland dates, however, from 1791, when, in the reign of George III, the Parliament of Ireland passed an Act entitled "An Act for

concentrated on the medical side of their calling, but that specialisation did not meet with the approval of the members of the King's and Queen's College of Physicians and Surgeons, who accused the Apothecaries of neglecting their primary function, namely, the training and examination of compounders. In February 1874 the *Medical Press* wrote:

"The Company was incorporated for the express purpose of regulating pharmacy in Ireland, and examining and qualifying pharmaceutists. In an evil day, and by evil counsellors, it was induced to retire from this function—it constructed a curriculum in medicine, surgery, midwifery and anatomy, established a school, and set up to make physicians. Of the humiliating failure of the attempt our readers may judge when we say that recent returns showed that their diploma fees, at 10s. per head, yielded just £10 a year. The Company and its Directors . . . by striking their pen through the ridiculous curriculum which they have vainly endeavoured to force upon their licentiates . . . may enter at once on the active function of regulating pharmacy and licensing pharmaceutists."

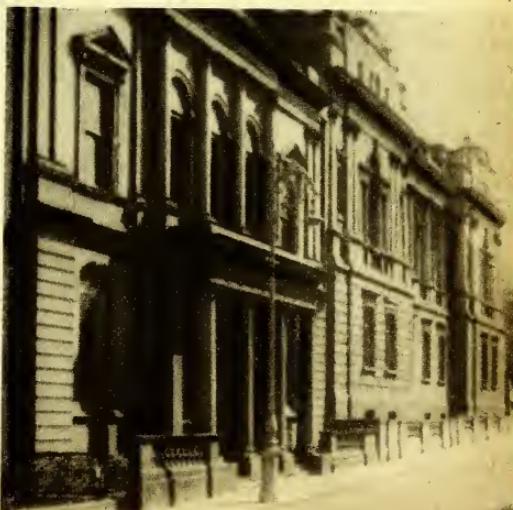
This outburst was provoked by a report that the Apothecaries were planning to conduct two examinations: one for apothecaries, and another for pharmaceutists requiring a shorter, non-medical training. Co-existing



Sir Dominic John Corrigan, Bart.
First president of the Society.

more effectually preserving the health of His Majesty's subjects, for erecting an Apothecaries' Hall in the City of Dublin and regulating the profession of an Apothecary throughout the Kingdom of Ireland." From that date it became illegal for any person to compound a medical prescription unless he had satisfied the apprenticeship and training conditions laid down by the Governors of the Apothecaries' Hall. The Apothecaries, however, filled a dual capacity, and practised medicine in addition to carrying out the functions of pharmacists. It appears that they

royal College of Physicians, Dublin. Room over arred entrance is the library, where early meetings of the Society were held.



with the apothecaries were numerous traders who sold poisons and veterinary medicines. Some of them held English qualifications, but the vast majority had acquired their knowledge by means of apprenticeship to druggists.

In February 1873, under the title of The Chemists' and Druggists' Society, they formed an association "to raise the standard of the trade by making it compulsory that apprentices should pass examinations, as may hereafter be arranged, before being admitted into the trade." This was done with the ultimate aim of obtaining a status similar to that secured by Act of Parliament to the Pharmaceutical Society of England. The Society decided that it had most to gain by joining forces with the Apothecaries, and plans progressed with the utmost cordiality until a breach of faith on the part of the Apothecaries led to strained relations.

Rival Bills

Events took an unexpected turn when the King's and Queen's College of Physicians decided to curb the Apothecaries, and introduced a rival Pharmacy Bill, the practical effect of which would have been to assimilate the regulation of pharmacy in Ireland with that of Great Britain. This proposition had been already rejected by the House of Commons in 1868 on the grounds that "the provisions of the Bill are throughout intended for Great Britain and, consequently, they cannot be extended to Ireland, the difference between the two parts of the kingdom in this respect being that, while in Ireland, for nearly 100 years, every person who practised pharmacy was compelled by law to attend a prolonged course of study and undergo a strict examination prior to his doing so, in England and Scotland any person, however qualified, might keep shop for that purpose."

The intervention of the physicians strengthened the hand of the Chemists' and Druggists' Society, and in April 1875, on the advice of Sir Dominic Corrigan, the Society decided

not to rely on any other organisation, and submitted to the Chief Secretary a draft Bill under which an independent pharmaceutic society would be organised. In June of the same year Sir M. Hicks-Beach, the Chief Secretary for Ireland, introduced to Parliament "A Bill to institute a Pharmaceutic Society, and to regulate the qualifications of pharmaceutical chemists in Ireland, and establish certain relations between the Pha-



FIRST IRISH PHARMACEUTICAL COUNCIL.
(From "The Chemist and Druggist," October 14, 1876.)

maceutical Societies of Great Britain and Ireland."

Within four months the Bill had received the Royal Assent. That lightning passage of legislation is in sharp contrast to present day practice, since for nearly a quarter of a century Irish pharmacists have been striving vainly to introduce legislation that would bring Irish pharmacy abreast of modern conditions.

The introduction of this Bill evoked indignation in English pharmaceutical circles; and THE CHEMIST AND DRUGGIST called it:

"As cool a piece of legislation as has often been suggested. Cool, indeed, is hardly the word for it."

Two factors were responsible or this resentment: (i) the adoption of the title pharmaceutical chemist—"for the very good reason that a certain substantial value attaches to it in consequence of the labours of the British Pharmaceutical Society during the past forty years"; and (ii) the reciprocity clause. On the removal of the reciprocity clause the following month, the Pharmaceutical Society of Great Britain withdrew its opposition to the Bill and offered the Irish body any support it might require. On August 11, 1875, the Irish Pharmacy Bill received the Royal Assent; and the first meeting of the newly constituted Council was held in the library of the College of Physicians, Dublin, on Friday, September 10, 1875.

The first Council consisted of four physicians and surgeons, four Apothecaries' Hall representatives, five druggists, three chemists and two provincial apothecaries. THE CHEMIST AND DRUGGIST's comment was:

"Erin's pharmaceutical sons will have to be very good and very cold if they manage to work for long in harmony with a group of energetic physicians, who will enjoy above all things the management and development of pharmacy in Ireland!"

Harmony, however, was preserved; and in no small measure this was due to the personality of Sir Dominic Corrigan, the first president of the Society.

Sir Dominic was born in Dublin in 1802, was educated at the Lay College, Maynooth, and took the degree of M.D. at Edinburgh in 1825. The University of Dublin conferred similar degree on him in 1849, and in 1868 he was made baronet. Not only was he a distinguished physician and the author of many papers of medical interest but he was also



Handwritten signatures of the members of the Council, 1932, are written over the photo:

- Patrick Boyle Kelly
- Thomas O'Brien
- Donald P. Boyd J. F. Costello
- P. J. Ciaran
- Thomas Smith
- D. W. Corrigan
- J. A. O'Byrne
- D. J. Corrigan
- J. Glavin
- A. J. Keenan
- E. G. D. Corrigan
- J. A. McHugh
- W. J. Keenan
- L. A. Mitchell
- D. J. McKnight
- J. M. Flood
- S. J. O'Leary
- Jas McCormack
- R. J. O'Leary
- S. J. O'Leary
- John T. O'Leary
- Frank H. O'Leary

Council of The Pharmaceutical Society of Ireland, 1932.

a Member of Parliament, and it has been said that he turned to the Pharmaceutical Society as a new outlet for his superfluous energies. It has been said, too, that it was due to his influence that the physicians took up the fight against the apothecaries. The new Society was fortunate in having as its first president a skilled parliamentarian and an able man "noted as a racy and forcible speaker, a formidable opponent and an unflinching advocate." Space does not permit an account of other personalities on the first Council, which included G. B. Owens, M.D., who was installed Lord Mayor of Dublin the following

January and retained that office for three years; W. Goulding, druggist, and M.P. for Cork City; and Aquilla Smith, M.D., whose name was mis-spelt "Smyth" in the Act.

Early meetings of Council were devoted to the task of drawing up regulations and planning an examination scheme. From the outset there was uncer-



Headquarters of the Society,
67 Lower Mount Street,
Dublin.

tainty as to whether two examinations (corresponding to the English Major and Minor) should be instituted. The Chemists' and Druggists' Society confidently expected recognition for those of its members who wished to confine themselves to the sale of poisons, even though it had been conducting lectures since 1873 at its headquarters in 174 Great Brunswick Street for the benefit of those who intended to sit for the examination for the qualification of pharmaceutical chemist. These lectures were under the direction of Professor Tichborne of Trinity College, afterwards second president of the Society when Sir Dominic Corrigan retired in 1878. The North of Ireland Chemists' and Druggists' Association was especially energetic in its demand for the lower qualification. A deputation from Belfast met the committee of the parent body in Dublin in February 1876. The meeting was probably important—but it is worth noting that "the meeting concluded with the discussion of a substantial luncheon . . . which was conducted with much

animation"! Despite the representations the chemists and druggists, the Pharmaceutical Society decided to confine its examination to one grade (pharmaceutical chemist). Examiners were appointed, and the date of the first examination was fixed for March 1876.

First Entrants

Twenty-one candidates were examined in March, of whom fourteen passed; thirty candidates were examined in May, of whom twenty-three passed; and in October of the same year forty-five candidates were successful of an entry of 100. Thus, within two months of the establishment of the Society eighty-two pharmaceutical chemists had been created. Most of the successful candidates established themselves in Dublin, Belfast, and other large centres; and the Chemists and Druggists used this as an argument to the Government when they again sought legal recognition as vendors of poisons. Those who had been keeping open shop in 1875 continued to enjoy their old privileges, but others who commenced practice after that date had their attention drawn to their precarious status when a Belfast magistrate imposed a fine £5 on a man, in business since 1880, who sold a pennyworth of laudanum in 1889. The Chemists and Druggists numbered then about 1,500. They agitated for legal interpretation of an ambiguous clause in the 1875 Act, and in 1890 the Amendment Act was passed, which gave to the Pharmaceutical Society the power of conducting examinations for the qualification of Registered Druggist. This Act also provided for the qualification of Assistant to Pharmaceutical Chemist.

It is on these two Acts that pharmacy in Ireland has been based for seventy-five years. No mention has been made of the acts regulating the sales of poisons, as this article is primarily intended to trace the origin of the Society. All the early business of the Society was transacted in the Library of the College of Physicians in Kildare Street, Dublin, and the first Registrar was H. J. Fennell (Librarian of the College of Physicians), who was appointed in February 1876. Mr. Arthur T. Ferrall became Registrar in 1884, and held office for the remarkably long period of forty-one years. Concurrently with Mr. Ferrall's appointment in 1884 the headquarters of the Society were transferred from Kildare Street to 11 Harcourt Street, Dublin. A few years later the Society acquired its own premises at 67 Lower Mount Street where it has remained up to this day.

At left, top to bottom, Mr. P. A. Brady (immediate past-president), Mr. Thomas C. Scott (president, 1950-51), Mr. James J. Kerr (secretary and registrar for eighteen years prior to 1947, when he retired.)



At left, portraits in the Council chamber.

THE Silver Jubilee OF THE

PHARMACEUTICAL SOCIETY OF NORTHERN IRELAND

IS BEING CELEBRATED IN BELFAST THIS YEAR

A review of its activities during the twenty-five years by the secretary

W. GORMAN, M.P.S. N.I.

THE Pharmaceutical Society of Northern Ireland will be celebrating its Silver Jubilee later in the present year, so the time is opportune to review, briefly, the formation, activities and progress achieved during the first twenty-five years of the Society and to mention some of those who have taken an active interest in its work. Under the Government of Ireland Act, 1920, the Northern Ireland Parliament was established and this, in turn, necessitated the formation of a separate Pharmaceutical Society. The Pharmacy and Poisons Act (Northern Ireland), 1925, provided for the constitution and general powers of the Society, examinations, registration, the carrying-on of the business of pharmaceutical chemist, registered chemist and druggist, and registered druggist, and for the sale of poisons.

Foundation Officers

In accordance with Schedule 1 of the Act, the Minister of Home Affairs, after consultation, nominated representatives of the pharmaceutical chemists and of the registered chemists and druggists and registered druggists to serve on the first Council. The following names of those appointed appeared in the *Belfast Gazette* of November 27, 1925:

Pharmaceutical Chemists' Representatives : Messrs. Samuel S. Badger, Magherafelt; John E. Connor, Newry; J. Carroll Culbert, Belfast; James Dundee, Belfast; Wm. J. Hardy, Belfast; Houston Lancashire, Ballymena; John Maxwell, Londonderry; Andrew C. McBride, Armagh;

H. J. Pring, Belfast; Wm. S. Taylor, Enniskillen; Horatio Todd, Belfast, and Andrew Wilson, Belfast.

Druggists' Representatives : Joseph Moffett, Belfast; Jas. E. O'Neill, Maghera; Wm. Jas. Rankin, Belfast; Frederick T. Smith, Antrim; Thomas F. Storey, Belfast; Samuel Suffern, Belfast, and Wm. E. Wilson, Belfast.

The Minister also appointed Mr. (later Sir) T. W. McMullan, M.P., to the Council as representative of the wholesale drug trade in Northern Ireland. Mr. John MacIlwaine, M.D., B.Ch., and Mr. Victor G. Fielden, M.D., were appointed as representatives of the Queen's University, and the Medical Committee of Northern Ireland chose as their representative Mr. Samuel E. A. Acheson, L.R.C.S. and P., Edin. The Minister appointed Mr. Horatio Todd as first president and Mr. T. F. Storey as vice-president.

There is every evidence that a strong body had been chosen, and that the composition of the Council met with general approval. City and country were both represented and, in addition, Messrs. John E. Connor, J. Carroll Culbert, Houston Lancashire, Wm. J. Hardy and Andrew Wilson had at one time or another



The Council Chamber.



FIRST COUNCIL OF THE SOCIETY: Back row, Messrs. H. G. Pring, O.B.E., J.P., F. T. Smith, J.P., S. Suffer Wm. E. Wilson, J. Maxwell, H. Lancashire, J.P., and J. E. O'Neil!, J.P.; middle row, Messrs. Wm. J. Rank J. C. Culbert, A. C. M. Bride, J.P., J. E. Connor, J.P., S. S. Badger, J.P., T. W. McMullan, M.P., J. Moffe J. Sayers (reporter), and W. S. Taylor; Front row, Dr. V. G. L. Fielden, Professor J. Small, D.Sc., Messrs. D. Kirkpatrick (secretary), F. Storey (vice-president), Horatio Todd, J.P. (president), J. Dundee (hon. treasurer) Wm. J. Hardy, A. Wilson, and Dr. S. E. A. Acheson.

been identified with the Council of the Pharmaceutical Society of Ireland. Once the composition of the Council was established, no time was lost in commencing activities, and a meeting was held on December 2, 1925, in the conference room, Ministry of Finance. This first meeting was continued on December 7, and the original business was concluded on January 4, 1926. Sir Dawson Bates (Minister of Home Affairs) took a keen interest in the formation of the Society and, with Mr. W. A. Magill (secretary to the Ministry) attended the first council meeting. Both were thanked for their invaluable assistance, and the good relations then established have continued throughout the Society's existence. Mr. Todd, in his presidential address, paid tribute to the work of Mr. James Guiler on the advisory committee that had helped in the framing of the Bill. Mr. Guiler had been offered the presidential chair, but owing to illness had been unable to accept it. One of the first duties of the Council was the appointment of a secretary, and an admirable choice was made in the selection of Mr. D. L. Kirkpatrick, who held the position until his retirement in June 1946. At first the position was part-time; later Mr. Kirkpatrick became a full-time official and, with his daughter, Mrs. Dwen, gave excellent service to the Society.

Qualification Changes

Prior to 1925, in addition to the pharmaceutical chemist, chemist and druggist, and druggist qualifications, an examination

was held for the certificate of Assistant to pharmaceutical chemist. The Act of 1925 provided for an Assistant examination but nothing for either the Chemist and Druggist or Druggist examination. Those who held either of the last-named qualifications were afforded the opportunity of qualifying as pharmaceutical chemists under Parts II or I of the Second Schedule to the Act, provided they did so within seven years from the passing of the Act. A special board of examiners was appointed for those two Parts. Part IV of the Schedule contained provisions for the Society main Qualifying examination under the new syllabus. Early in 1926 the College of Technology, Belfast, instituted day and evening classes for pharmaceutical students and examinations under Parts II and III were held in June 1926. The first examination under the new syllabus (Part IV) was held in June 1928, and Mr. Alex. T. Hardy was the first student so to qualify. To a lady, Miss L. M. Forrest, fell the honour of being the first student to gain the Society's gold medal. By the end of 1926, classes in the subjects of the Preliminary Scientific examination had been instituted at many of the Technical schools throughout the province. It is interesting to note that whereas, at one time eleven provincial schools were recognised by the Council, only five are today holding classes for the Preliminary Scientific examination.

In the early years of the Society, most students wishing to register as apprentices took the Pharmaceutical Preliminary examin-



FIRST AND PRESENT PRESIDENTS:
Messrs. Horatio Todd and P. R. W. Shinner.



FIRST AND PRESENT SECRETARIES:
Messrs. D. L. Kirkpatrick and W. Gorman.

ion which was held in conjunction with the Matriculation examination of the Queen's University, but at a lower standard. By regulations made under the Medicines, Pharmacy and Poisons Act (Northern Ireland), 1945, students applying for registration as apprentices must have reached matriculation standard and have passed in English and mathematics, together with three other subjects from a specified list. Until the Act of 1945, no provision was made for apprentices to attend classes during the day. Those wishing to read for either of the Society's examinations had to attend after their day's work in the shop had been completed. Students are now permitted to attend for part-time instruction during the first three years of apprenticeship. Courses are so arranged that a student should be able to sit for the Preliminary Scientific examination about two and a half years after commencing apprenticeship. If necessary, a second attempt may be made before the end of the third year. During the fourth year, apprentices are permitted to attend in the daytime for a session of three terms (approximately nine months) in the subjects of the final examination; many pharmacists are of the opinion that the time allotted is insufficient and that it should be extended. Since the inception of the Society, the following thirteen students have been awarded gold medals on the results of the Final examination: Miss Winifred M. Forrest (1930), Messrs. J. Noel Patterson and Edward Webb (1934), Daniel J. McArdle and Stanley J. Johnson (1937), Thomas J. W. Montgomery (1939), Charles A. McDowell (1940), John A. McNeill (1941), Patrick J. Gallagher and Robert E. Courtenay (1942), Thomas D. Proctor (1947), William A. Bassard (1948) and Desmond D. Connolly (1949). That an award has been made in each of the last three years is surely a sufficient argument for allowing students to attend full-

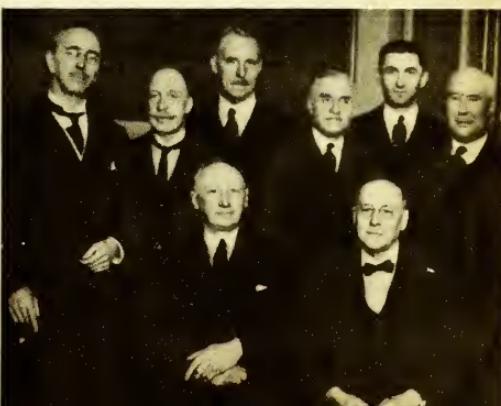
time classes during the fourth year of apprenticeship.

The syllabus for the Final Qualifying examination has, since 1925, been modelled on that of the Chemist and Druggist examination of the Pharmaceutical Society of Great Britain, and the two Societies entered into a reciprocal agreement in 1929 for the mutual recognition of each other's qualifications for purposes of registration. In addition, the Northern Ireland qualification is recognised in Australia, New Zealand and Rhodesia.

Leading Figures in the Society's History

It is not possible to include the names of all who have taken an active part in the work of the Council, but special mention must be made of Mr. Horatio Todd, the Society's first president, who was elected to a second term of office and afterwards served for three years as honorary treasurer. Mr. James Dundee,

RECIPROCAL AGREEMENT NEGOTIATING COMMITTEE: Standing, Messrs. Fred Storey (vice-president, P.S.N.I.), T. Hardy, M.P.S.G.B., D. L. Kirkpatrick (secretary, P.S.N.I.), Major E. S. Peck, M.P.S.G.B., H. N. Linstead (secretary, P.S.G.B.), A. C. McBride, J.P., M.P.S.N.I., and L. M. Parry (vice-president, P.S.G.B.); Seated, Messrs. W. J. Hardy (president, P.S.N.I.), and Herbert Skinner (president of the Pharmaceutical Society of Great Britain, 1929).



who was the first honorary treasurer, held office for four years and was later elected vice-president. The present strong financial position of the Society is in no small way due to his foresight and ability. Messrs. Wm. J. Hardy, A. C. McBride and T. F. Storey (president in 1929 and again in 1934), gave much time to the work of the Council in its early days. Messrs. Robert I. Edwards, Samuel S. Badger, John E. Connor, John Maxwell, W. S. Taylor, and S. Gibson each held the presidential office, and Mr. Walter C. Tate, president when war was declared in 1939, was elected for a second year. Mr. James Glendinning, who seldom missed a meeting though travelling from Londonderry, Mr. Henry F. Moore (honorary treasurer for three and vice-president for two years), Mr. J. Trevor Nicholl and Mr. C. Abernethy, were in office during the difficult war years. More recently, Mr. James McDowell gave splendid service during the time which followed the introduction of the 1945 Act, and Mr. John McGregor encouraged the evening lectures and meetings, to which Mr. Henry H. Cowzer, the Society's youngest president, has given full support. Professor James Small, who has been one of the Queen's University representatives on the Council since January 1926, has rendered invaluable service, especially in connection with education. In recognition of his work he was elected an honorary member of the Society. Dr. S. E. A. Acheson, representative of the Medical Committee of Northern Ireland, Professor E. B. C. Mayrs, M.D., representative of the Queen's University, Mr. Herbert Skinner and Mr. L. Moreton Parry (past-presidents of the Pharmaceutical Society of Great Britain) were also elected honorary members in recognition of their services to the Northern Ireland Society.

The Belfast Conference

Members of the Society are also members of the British Pharmaceutical Conference, and



FIRST STUDENT TO QUALIFY UNDER 192 ACT AND FIRST GOLD MEDALLIST: Mr. A. T. Hardy and Miss L. M. Forrest.

representatives of the Council have been present at most of the Conferences since 1928. In 1935 a successful Conference was held in Belfast under the chairmanship of Dr. F. W. Crossley-Holland. The programme included a reception by the Lord Mayor and Lady Mayoress of Belfast (Sir Crawford and Lady McCullough), at the City Hall.

The work of the Council increases as new legislation is introduced and, in the near future a Poisons Board is to be established in Northern Ireland. It is likely that the opportunity will be taken to revise the provisions relating to apprenticeship and the Qualifying examinations. Control of the Northern Ireland Chemists' Benevolent Fund has, to a certain extent, been transferred to the Society's officers. The winter programme of lectures will be added to by educational films now that the Society has its own sound projector, and the celebration of the Silver Jubilee of the Society is already under discussion. The Health Services Act has given pharmacy a recognition that has long been denied it. With wise leadership there is no reason why the future should not be looked forward to with confidence.



LADIES' COMMITTEE AT BRITISH PHARMACEUTICAL CONFERENCE BELFAST MEETING, 1935
Standing, Misses E. G. Crawford, K. A. Patterson, K. E. Robinson, E. Fox, M. M. Murray, L. M. Forrest, and A. S. J. Laverty; seated Mesdames R. I. Edwards, S. S. Badger, R. Dwen (secretary) F. Storey (chairman), C. Abernethy, and W. Martin. Miss R. J. W. Barry.

1. S. Granator.
Dated 1684. Height
7½ in. E. Methrid.
Height 6½ in. T. de
Carabe. Height 3½ in.

DRUG JARS

and their inscriptions

BY AGNES LOTHIAN,
PH.C., A.L.A.

WHILE "vessels for apothecaries" were made at the London potteries on the south bank of the Thames at the end of the sixteenth century, it was not until the middle of the next century that jars bearing inscriptions appeared.

One of these early Lambeth pots is illustrated (2, below). The words P. RUFFI are enclosed in a cartouche bearing at either end the profile of a man smoking a pipe. Named after the Hiero of Ruffus of Ephesus (100 B.C.), Pil. Ruffi is said to have been prescribed by Avicenna. Official in the first London Pharmacopœia as *Pilulae Pestilentiales*, RUFFI, the name is still used as a synonym for *Pills of Aloes and Myrrh, B.P.C.*

Another rare Commonwealth specimen is the syrup pot, S. TUSSIL or syrup of coltsfoot (3, below). The inscription is surmounted by the unusual design of a unicorn's head.

During the latter half of the seventeenth century a favourite design was that of "the angel with outspread wings" (1); the claw-

like appendages which terminated the inscription band were a characteristic feature.

The pomegranate syrup pot, S. GRANATOR (1), bears the initials M. H. as well as the date 1684. The Howard collection includes a set of these jars originally made for Michael Hastings of Dublin.

The middle jar, E. METHRID (1), once contained the famous electuary Mithridate, believed to have been devised by King Mithridates VI of Pontus as an antidote against poisons and venomous bites. The formula, which contained over fifty ingredients, included the bellies of scinks.

On the right is a small lozenge pot T(rochisci) de CARABE. Lozenges of amber also contained red coral.

Howard considers the design of the marshmallow ointment jar, U. DIALTH (2), c. 1700, to be transitional between the simple pattern of the seventeenth century and the more elaborate decorations of the eighteenth century jars. Note the rolled ends of the cartouche; the clawlike appendages have disappeared.

2. U. Dialth. c. 1700. Height 7½ in. P. Ruffi. c. 1652. Height 3½ in. S. Cap. Ven. c. 1670. Height 8½ in. 3. Lambeth, c. 1660. Cartouche surmounted by head of unicorn. Height 3½ in.





4. 5 and 6. Early eighteenth-century English delft.



7. Sixteenth-century Italian albarellos Deruta, one dated 1557. Height 9 in. 8 (below). Seventeenth-century Italian albarellos Deruta. Height 9 $\frac{1}{2}$ in. 9. Group of Italian drug jars. The upper jar on right is dated 1585. Lower shelf: Savona pill pot and lozenge jar dated 1641.

The spouted jar on the right, S. CA VEN., illustrates a pattern of the 1670 Dated specimens may be seen in the Fit william Museum, Cambridge. Syrup Capillorum Veneris is syrup of maidenha fern.

The last group of English delft consists of eighteenth-century drug jars. The little pill pot P. FAETIDAE (6), fetid or stink pills as Culpeper called them, is an example of the bird and basket type of decoration. Slightly more common is the cherub and cockleshell variation seen on the syrup pot S.E.5 Q.RAD. (Syrupus Quirque Radicibus) (4). The Five Roots were Butcher's Broom, fennel, asparagus, parley and smallage. S. DIACOD (5) is syrup of white poppies. This miniature spouted jar is only 6 in. high.

Painted in blue, the body of this pottery is covered with an opaque milky tin enamel glaze. The earlier examples have pinkish tinge. A blue or faint turquoise





tint is sometimes seen on eighteenth-century English delft. Polychrome specimens are rare.

The Deruta albarelos* (7) are the earliest Italian jars in the collection. The wreath decoration in copper green, dark orange and yellow is traversed by the inscription, above which, on the left hand ar, is the date 1557. The other has a monastic pharmacy mark at the foot of the wreath.

The decorative jars in the group (8) are also Deruta, but seventeenth-century. Art lovers will recognise the lower jar as the one that appeared in a painting by Margaret Thomas at a recent exhibition.

Armorial shields heavily scrolled in yellow and blue decorate the three Castelli albarelos (10). The jar in the centre bears heraldic device of a crowing cock. On the outer pair the shield is surmounted by a plumed helmet; in the middle are a star, flag and tortoise with the motto FESTA LENTE (hasten slowly). The Museum of Pharmaceutical History, Basle, and the Reber Collection have syrup jars belonging to this set.

A third FESTINA LENTE jar is seen on the bookcase in illus. No. 9. On the right of the small drug pot (upper shelf) is an Italian albarelo dated 1585. On the lower shelf are a Savona pill and a lozenge pot, both dated 1641. In the centre is a seventeenth-century jar bearing a religious motif.

The eighteenth-century Spanish albarelo (11) is Sevillian. The badge of Our Lady of Mercy (the cross of Barcelona Cathedral and the bars of Aragón) is surmounted by a crown.

Inscriptions may help in ascertaining the origin of drug containers. The use of old plant names and titles deleted from later dispensatories may enable a date to be determined.

*Cylindrical jars, often drawn in at the waist to facilitate grasping.

10. South Italian drug jars, seventeenth-century.

11. Spanish albarelo, early eighteenth-century. Seville. Height 6½ in.

On the Italian jars described above the inscriptions are as follows:—

VNGT^o DEFENSIVO—Unguento Defensivo, protective or healing ointment.
ELLm de LENTICCIUM—Electuarium de Lenticium or Lentisk (mastic wood).
LOOH de FARFARA—Lohoch de Far-fara or Coltsfoot linctus.

DIAPRUNIS S—simple confection of prune.

LOC de PULME VLPIS—Lohoch de Pulmone Vulpis or linctus of foxes' lungs.

PLIRIS ARCOTICON—the great Restorative powder usually dispensed as an electuary.

PIL D AGARI co MES.—Agaric pills according to Mesue.

HIERA PICRA GALENI—Hiera Picra or Holy bitter according to Galen.

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Frothingham, A. W. Talavera Pottery. 1944.

12. Early Victorian bear's grease lid. The label reads "Ross & Sons' Genuine Bear's grease perfumed. 120 Bishopsgate Street, London."



BIRTHPLA



GRASSE: Centre of France's manufacture of perfumery materials. The bulk of the town's population find employment within the industry.

ARCHITECTURE: Half cloister, half castle, the perfumery factory below preserves its atmosphere of the Provence of days long gone by.



LAVENDER: The flowers, collected locally, are pressed into the still. Bare feet minimise risks of blossom damage and loss of aroma.

STORAGE: In a quiet warehouse thousands of litres of essential oils stand by in readiness for the compounding hand in due course.



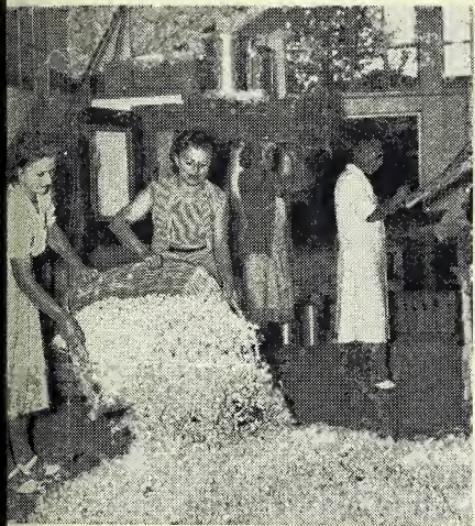
EXPERT: A professional "nose" samples an aroma.



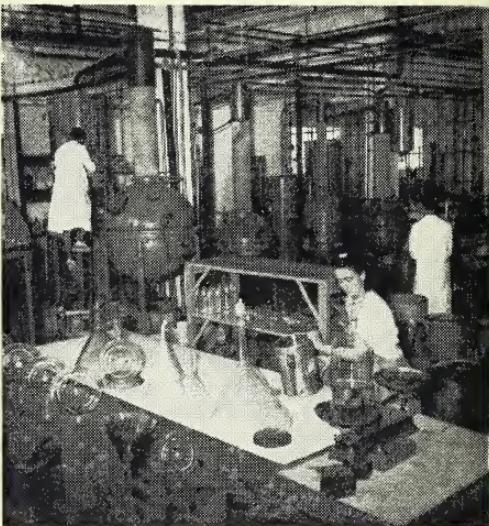
APPRENTICE: Jacqueline, daughter of a master perfumer, samples an aroma.



FRENCH PERFUMES



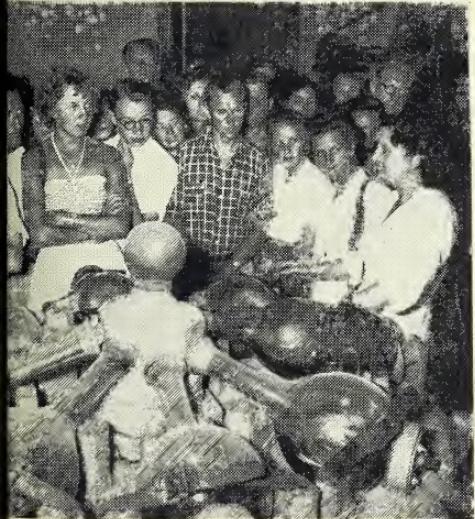
ASMIN: Opening only at night, the flowers must be collected at daybreak and processed the same morning, to keep their fragrance.



APPARATUS: In a modern perfume works, each flower, even each species, has its special still, so as to ensure perfection of its aroma.

JRASSE, set among lavender and jasmin-clad hills hardly ten miles from the Mediterranean, today seems the choice of nature, almost of destiny, to be the centre of the perfume industry of France. In fact, its pre-eminence was achieved via the leather industry. It was from Jasse that the Medicis obtained the most elegant of their perfumed gloves. When fashions changed, the craftsmen persisted with the perfumes and forgot the gloves. They maintain their pre-eminence.

LENDING: Giant flasks of perfume are taken in a mechanical rocker for three hours daily for six months to concentrate and mature.



SALESROOM: The myriad bottles, small and large, are displayed in a tasteful setting of period furniture, hangings and objets d'art.





Left : Entrance to the factory of the Treforest Chemical Co., Ltd.—typical of the modern appearance of factories in the new Welsh industries.

Below : A young worker attends to the crystallisation of Nipagin M (Nipa Laboratories, Ltd.). Right, below : in the same factory, research chemists at work.

Bottom Right : Testing E-mil Gold Line chemical thermometers at the factory of H. J. Elliott, Ltd., Tre-forest Trading Estate.



PHARMACY IN THE NEW WELSH INDUSTRIES

SINCE 1939 an industrial revolution has occurred in South Wales and Monmouthshire, in which the pharmaceutical and allied industries have played a notable part. Before 1939, the production of manufactured goods was unimportant to the economy of the area. Today, nearly twice as many men (197,000) are employed in manufacturing as in the coal industry, and nearly a third as many women are similarly employed—itself a notable change in a traditionally male-employing community. In July 1948, "Pharmaceutical preparations, toilet preparations, perfumery, chemicals and dyes" alone accounted for some 5,000 employees, and since then the number has increased.

Formerly the district, which is equal in area to one-fifth of Wales and contains 70 per cent. of the country's insured population, lived by the three heavy industries

A glimpse at a Welsh valley in the early 'thirties.



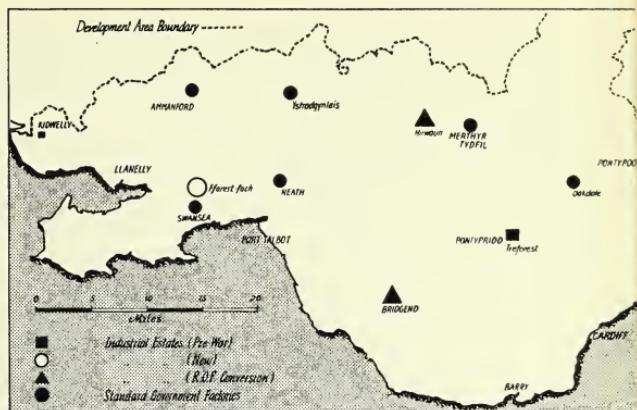
of coal, steel and tinplate. Now every industry, light and heavy, is represented there as a result of a Government diversification-of-industry policy. The Government has given inducements to industrialists to go to the area and the resulting industrial migration has provided jobs for the unemployed, and a more varied, and therefore more stable economy. Since 1945, 58,000 new jobs have been found in the area, while projects already started or planned should provide a further 37,000. Over twenty firms in the pharmaceutical and allied industries have already established factories in the area.

A New Start

First steps towards the great change in economy of the area were taken by the Government during the depression of the 'thirties, when South Wales was particularly badly hit because of the loss of the export market for steam coal (on which the centre of the area depended). In 1932, for example, the average unemployment of

all of industrial South Wales was 41 per cent. of the insured population (in the steel industry it was 62 per cent.; in coal, 45 per cent.); at Merthyr Tydfil, during the years 1930-35 unemployment was never less than 50 per cent.). In 1931, at the Board of Trade's request, local universities commenced a survey of the areas of greatest unemployment in Britain, and in 1934 the first legislation, the Special Areas (Development and Improvement) Act, was passed. The Act appointed two Commissioners for Special Areas to steer new industry to the Areas.

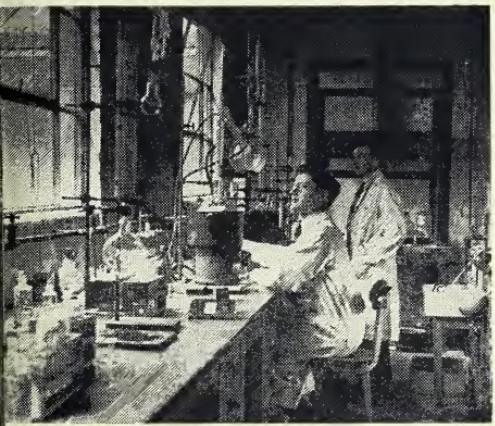
Little was done, however, until 1936-37. Then the Government was empowered to set up non-profit-making industrial estate companies to develop the Special Areas. In 1936, the South Wales and Monmouthshire Trading Estates, Ltd. (now the Wales and Monmouthshire In-



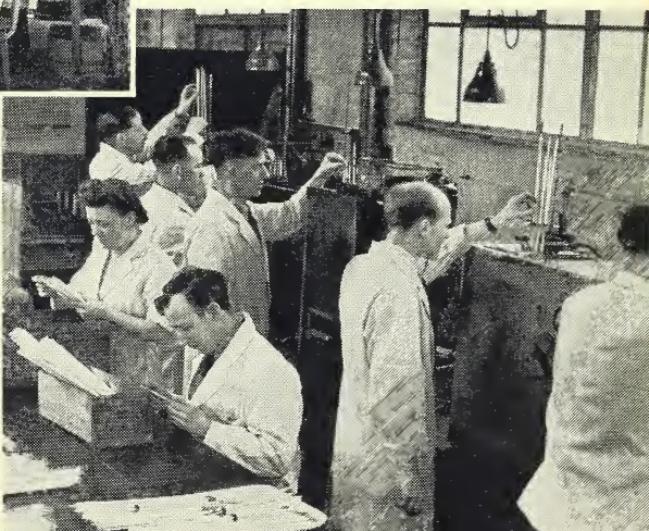
Map showing position of some of the industrial estates, etc.

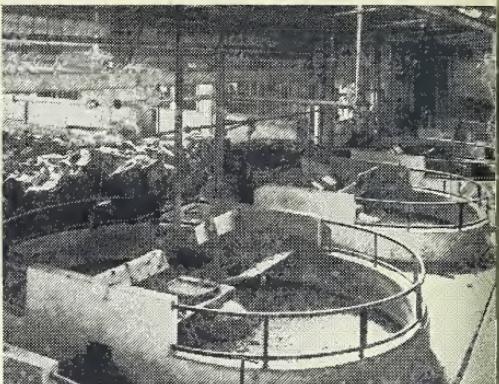
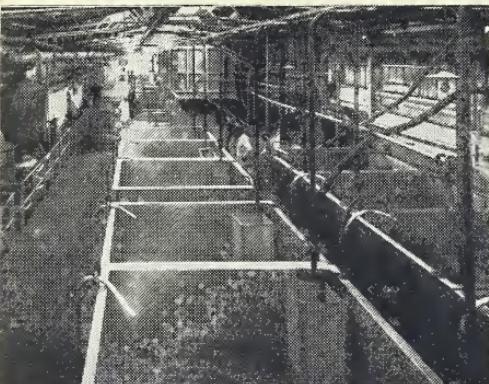
during the war, and have since been converted by the Estate Company into new industrial estates or individual factories.

The Distribution of Industry Act, 1945, passed in May of that year, empowered the Board of Trade to take measures to maintain a high level of employment. The Board was authorised to build factories in the Development Areas (as the former Special Areas were now named) with Government money through the industrial estate companies, and to help firms that wished to obtain accommodation privately. That help was given by, for example, granting building licences easily, or by making available premises not previously used as factories. The Board of Trade is required by the Act to bring about the diversification of industry in the Areas. Already within the South Wales Develop-



dustrial Estates, Ltd.), was established; it commenced developing the Treforest Trading Estate. By 1939, some thirty factories, employing about 2,000 people, had been built on the Estate, and six other sites had been developed. The outbreak of war in that year arrested the continued development of the Area, but a number of large Royal Ordnance and Government factories were built there





Left : Ossein digestion plant and, right, ossein washing wells (Treforest Chemical Co. Ltd.).

ment Area about 230 factories (of 5,000 sq. ft. and over) have been completed. Of these, 140 have been Government financed. A further seventy factories are under construction. Included in this programme are fifty "advance factories"—factories built in advance of demand, in areas unattractive normally to industrialists, but in which employment is needed. Ten of such factories are designed for the partially disabled (including ex-miners suffering from silicosis and pneumoconiosis) and are called "Grenfell factories." A rebate of half the normal rent for the Grenfell factories is allowed if the factory employs at least 50 per cent. of disabled persons.

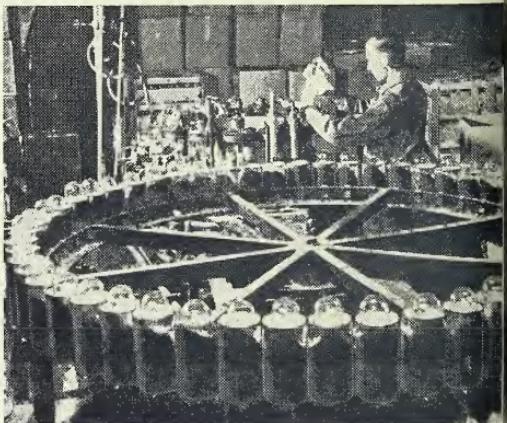
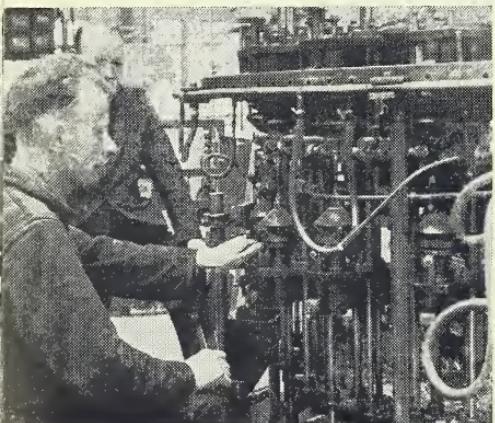
The Treforest Estate, the largest of the new industrial estates in South Wales, provides employment for 10,500 people. The site, south of Pontypridd and eight miles

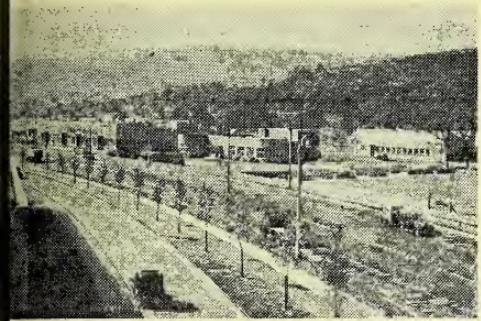
An operative adjusts an ampoule forming-machine (Johnsen & Jorgensen Flint Glass Co., Ltd.).

north-west of Cardiff, was chosen as being a meeting-point for the two Rhondda Valleys and the Aberdare and Taff valleys. It is situated in the wider part of the Taff valley.

In the Planning Room of the Board of Trade office for Wales in Cardiff, details of the organisation of the Area are analysed for the benefit of prospective industrial tenants of the Estate Company, with the help of specialised wall-maps, graph models, etc. Inducements to industrialists to come to the Area include, for example, nominal rents for factories. The factories have heating and other services supplied. Houses are made available for any key skilled workers whom industrialists need to bring with them. Since 1945, about 420 new firms have gone to South Wales, 280 being from outside Wales, mainly from

Processes in the making of vacuum-flask innertes (Acme Vacuum Flask Co., Bridgend).

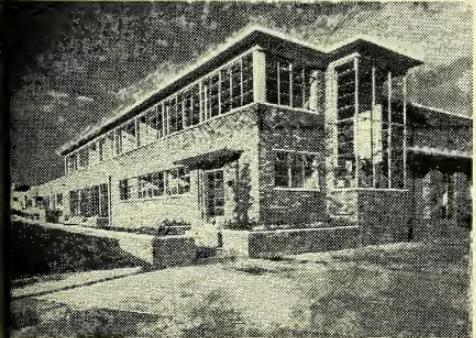




London and the Midlands. Unemployment in the South Wales Development Area is now only 4.5 per cent. Though that is higher than anywhere else in Great Britain, the high proportion of elderly and disabled men who are unemployed in South Wales provides an explanation and a problem of considerable difficulty. Nevertheless the Government programme (which is non-political, in that all parties have supported the policy) has gone far to remove unemployment and to diversify industry in the Area.

Factories Visited

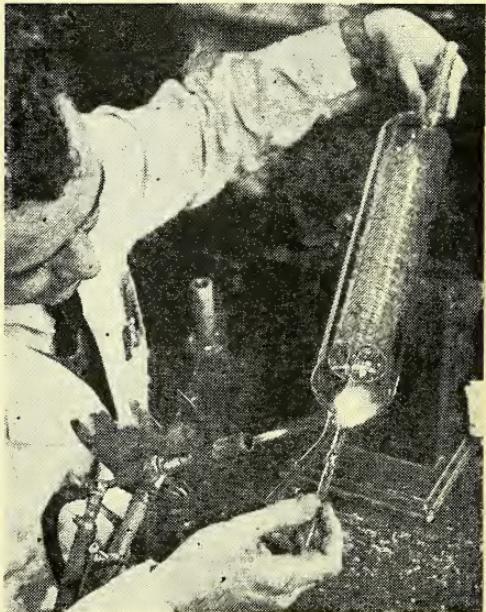
Attention to staff amenities was a feature common to the factories in the pharmaceutical and allied industries in the area visited recently by a member of the editorial staff of THE CHEMIST AND DRUGGIST. That attention was reflected by the obvious acceptance of staff canteens, for example, as part of the industrial structure; by the particular care taken to synchronise factory hours with the workers' bus services to and from the estates; and by the fact that, where possible, staff bonus and incentives schemes had been organised. Managements had laid importance on training facilities, and the success of



Top left: Part of the Treforest Trading Estate showing the central roadway.

Bottom left: Exterior of the factory of Gnome Photographic Products, Ltd., Cardiff, and top right: inside the factory, a camera lens-mount being turned on a capstan lathe.

Bottom right: A glass-blower completes an intricate assembly at the factory of H. J. Elliott, Ltd.



these alone continues to be a measure of the enterprise, adaptability and co-operation of the people of the area. Staffs seemed happy and productivity high. The high proportion of the pharmaceutical products made in the Area that are going for export is a feature of national interest.

Products of Research

Among the companies in the Area that have contributed much to pharmaceutical research is Nipa Laboratories, Ltd., Treforest Trading Estate, specialists in chemical preservatives, antiseptics and antioxidants. Early in 1939 the company started in a small factory on the Estate under the managing directorship of Dr. E. Boehm, who had brought to Britain an extensive experience in the research and development of those products. At first the factory concentrated on making the preservatives Nipagin, Nipasol and others in the same range, and by 1940 the demand for the products necessitated the company's removal to its present larger premises on the Estate. Later, Dr. Boehm and colleagues discovered a group of compounds active against gram-negative organisms and capable of being used in conjunction with penicillin. One of the most important members of the group, β -phenoxylethyl alcohol, was marketed under the name Phenoxetol.

Researches carried out in collaboration with Dr. R. Williams (a director of the company) led to the production by the laboratories of the lower alkyl gallates as antioxidants which were marketed as Progallin. More recently, the company has developed a commercial method of manufacture of the higher esters of gallic acid for similar purposes. In addition, the laboratories manufacture a number of intermediates, including sun-screening agents derived from *p*-aminobenzoic acid. The company exports much of its output.

Glassware is produced at a number of factories in the Area. H. J. Elliott, Ltd., Treforest, for example, specialise in high-grade laboratory volumetric glassware and precision chemical thermometers. They are the largest manufacturers in that field in the Empire, and send 60 per cent. of their output to the newly made export market. The company makes a policy of training and employing disabled persons from the mines, and is the first glassware firm to have made a time-study of jobs for a staff bonus incentive scheme. The factory has an active works joint produc-

tion committee, a welfare and first-aid centre and two staff canteens. Brande apparatus (E-Mil Green Line, guaranteed to comply with National Physical Laboratory grade-A specification; and E-Mil Gold Line, with the N.P.L. grade-B specifications) have been introduced by the company. Initiative has also been carried in the method of packing, each article now being issued into its own specially fitted carton, which in turn is made up into standard case. Packed like this the apparatus can be shipped in light slatted crates, and in the laboratory can be easily stored. Stoppers made of inert plastic material, which provides a gas- and liquid-tight closure that will not seize, have been adopted for graduated flasks and cylinders. Messrs. Edwards are one of the few manufacturers to make blood pipettes

Transfer from London

Another glass-working factory is that of the Acme Vacuum Flask Co. As the company's London factory, established in 1931, was destroyed during the war, the company moved to Bridgend in 1946, and in that year started producing vacuum flasks with a group of fifteen employees three of whom were key men from London. Now some 200 persons are engaged including twenty-five partially disabled. During the past three years output has risen fourfold, and wages by 30 per cent. while the price of the product has fallen by 20 per cent. Efficiency of planning, improvement of machinery design; the work of the factory's joint consultation committee; introduction of breakage premium, production bonus and pension scheme; and careful selection of employees have contributed to that achievement. The factory is divided into two distinct sections—a glass-making plant and a glass-processing (i.e., flask-making) section. The glass-making section, completed at the end of 1949, consists of two furnaces with two annealing lehrs. Glassware is blown or two American paste-mould machines, imported on licence. They are thought to be the most modern of their kind in Great Britain, and have a maximum output of twenty tons of glass per week. Most of the smaller machines in the flask-making section have been made or developed by the workers of the company.

Under a Ministry-of-Labour sponsored training scheme, recruits to the factory are given a training course with pay. The export target for the factory is 40 per cent.

of the total output of its production. At the Treforest factory of Johnsen & Jorgensen Flint Glass Co., Ltd. (specialists since the early 'twenties in the manufacture of tubular glass ampoules), rows of gas-heated "forming machines" are daily in operation at present for twenty-four hours, five days a week. Many of the operatives are ex-miners, some of them suffering from silicosis and pneumoconiosis. Several million ampoules per month of sizes from $\frac{1}{2}$ c.c. to 30 c.c. are produced at the factory. Great care is taken to ensure the cleanliness of the interior of the ampoule. Ampoules to contain liquid are made from canes of neutral glass tubing. These are inserted into a forming machine which passes the tube through a series of flames to soften the glass in the required places. By cam-controlled movements, special gas burners shape the glass into ampoules, and the finished articles are finally ejected. The ampoules are then passed through heated lehrs, or annealing ovens, to remove the strain in the glass caused by the localised heating in the forming machines.

Gelatin from Ossein

At the Treforest Trading Estate, the Treforest Chemical Co., Ltd. (associated with P. Leiner & Sons, Ltd., London), specialise in edible pharmaceutical, photographic and technical gelatins, and in dicalcium phosphate. Their production at Treforest started in 1938. Since then the factory has been increased in size some ten or twelve fold, and it is now claimed to be the largest factory of its kind in the world. Since 1943 ossein gelatin has been the main product. The factory works seven days a week, employs over 400 persons (many of them ex-miners whom the company has trained), and possesses two cens. A bonus scheme is in operation.

Crushed sun-dried cow bones imported from India are the starting material. From hem phosphate is first extracted with dilute hydrochloric acid in acidulation units. Each unit is about thirty yards long and consists of a number of rubber-lined rats, arranged for counter current flow. The tricalcium phosphate in the bone is hereby converted to the soluble monocalcium salt, which is run off as a solution. (The phosphate is precipitated as dicalcium phosphate and removed.) Ossein remains in the acidulation units. After being washed free of acid, the ossein is mixed with milk of lime and left for two months, during which the hydrolysis of the

collagen to gelatin commences. The lime is washed out using a battery of twelve paddles and the ossein transferred (at correct pH) with water to a boiling tank of aluminium or stainless steel. A 5 per cent. solution of gelatin is obtained, which is filtered and then concentrated. The liquid is set by pouring into a battery of several hundred aluminium trays, and cooling with water and finally dried.

Photographic Engineering

Light engineering, as exemplified by the work of Gnome Photographic Products, Ltd., is typical of the new industries that have been encouraged to come to the Development Area. The company's factory is on an individual site at Whitchurch, Cardiff, and was designed for the Wales and Monmouthshire Industrial Estates, Ltd., by Sir Percy Thomas. The company specialises in cameras, enlargers, and dark-room apparatus, and exports its products to fifty-two countries, including the dollar areas. Mr. H. Loebstein (managing director) brought his knowledge of the manufacture of this type of apparatus to Britain from Germany and set up a small factory with five or six men in the Treforest Trading Estate in 1938. He moved into Cardiff to occupy larger premises during the war (when he was principally engaged on supplies to the Royal Navy), and finally opened his present factory in May 1947. Now the company employs over 100 workers. In making the products every process except casting is carried out in the works. At the time of the visit of a member of the editorial staff of THE CHEMIST AND DRUGGIST, the factory was busy making the newly introduced Gnome Pixie-Flex twin-lens reflex camera.

The general pharmaceutical side of the trade is represented in the Area by, among others, McClure, Young & Co., Ltd., Bridgend, who are one of the few manufacturing drug houses in South Wales supplying direct to retail pharmacists by weekly service. Among their specialities is the overprinting of chemists' names on packed products. The manufacturing side (in particular, of ointments, creams, emulsions, etc.), is also being developed at Bridgend. Employees have the unusual facility of being able to exchange jobs with their opposite numbers in the company's factories in London and Scotland, staying at each other's homes, and so enjoying the amenities of town or country and seaside for a few weeks apart from their holiday.

JOSEPH LOUIS GAY-LUSSAC, 1778-1850

CHEMISTS and physicists from many countries pilgrimaged to Saint Léonard, Haute Vienne, France, recently to commemorate, in ceremonies held under the French President's patronage, the death one hundred years ago (on May 9, 1850) of Joseph Louis Gay-Lussac.

Designer of the sulphuric-acid-plant tower that bears his name; formulator of a simple law of combining volumes of gases; the discoverer of cyanogen and the inventor of volumetric analysis, Gay-Lussac was one of the most illustrious of French chemists. Bold, accurate, acute in explanation, yet reserved and perhaps a little vain because of his capability, he was at once an unconventional and romantic figure. One day in his youth during the French Revolution, for example, he entered a linen-draper's shop, and noticed a girl assistant reading a book between serving customers. The book, he found, was a treatise on chemistry. His visits to the shop became more frequent and his eventual proposal of marriage to the seventeen-years-old Josephine was accepted (a

daughter of a musician, she had cut short her schooling to relieve her family's straits). Gay-Lussac sent her back to school, and their marriage, which proved to be exceptionally happy, followed in 1808.

Intended for the Bar

The Revolution, too, had interfered with Gay-Lussac's early education. Born on December 6, 1778, the son of a judge named Gay (who later took the name Lussac from a small estate), he was intended for the Bar. The Revolutionary conditions compelled him to commence studies in his native town, Saint Léonard, but when his natural bent carried him toward scientific investigation, he sought to conclude his instruction in Paris. Scarcity had caused most of the Paris academies to be disbanded, but in 1795 (when he was just over sixteen years old) a M. Censier accommodated him rather like an "adopted son" because of his personal qualities and "ardent love of study."

Two years later he entered the *École Polytechnique*, and became a demonstrator to Berthollet (then professor of chemistry there), and also assisted Fourcroy. He was of such promise that Berthollet took him to his private laboratory at Arceuil, near Paris, where Laplace (friend of Biot) was a neighbour. There he commenced his life's researches, largely devoted to the territory common to physics and chemistry. He published his first paper (on the expansion of gases and vapours) in 1801, and then gave his attention to the improvement of thermometers and barometers, the study of the tension of vapours, the determination of vapour densities, laws of evaporation, capillary effects, etc.

In 1804 the French *Institut* nominated Gay-Lussac and Biot (considered to be the most ardent of the younger scientific workers at that period) to make a balloon ascent to investigate an assertion that the earth's magnetism lessened as the earth surface was left. On August 20, after the ascent had been twice postponed on account of mishaps (despite precautions "which left nothing to be desired"), the ascent was made, the two scientists reaching a height of 4,000 metres. Gay-Lussac made another ascent alone, reaching 6,50 metres (a record). He brought back samples of air, which he found to be of the same composition as air at the surface, and during his two ascents established the



GAY-LUSSAC (from "Les Savants Illustres de la France," A. Mangin, Paris, 1857.)

there was a gradual reduction of pressure, temperature, and moisture, with increasing altitude. He determined about that time the coefficient of expansion of gases more accurately than Dalton had done.

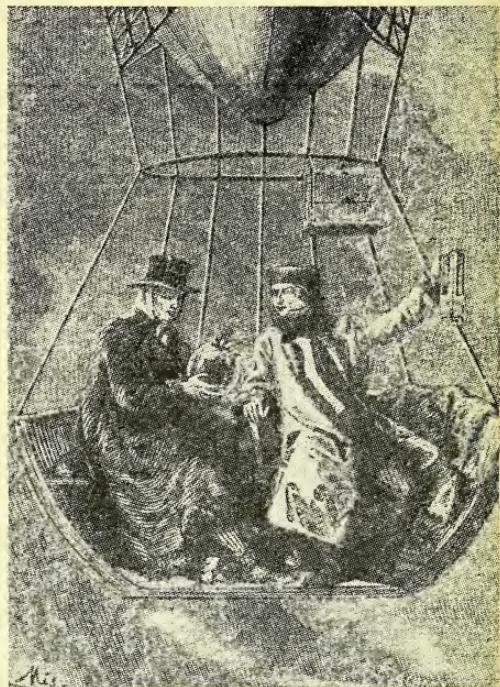
Through the intervention of Berthollet, Gay-Lussac was allowed to accompany Alexander von Humboldt to Italy and Germany. During the tour he established, at a laboratory in the house in Rome of Wilhelm von Humboldt (the Prussian Minister) the presence of fluorine and phosphorus in the bones of fish. On his return to Paris in 1806 he was elected a member of the *Institut* and the following year was among the first members of a distinguished scientific *Société d'Arcueil* formed by Berthollet. Extending the work of Priestley and Cavendish on the combining ratios of hydrogen and oxygen, he worked on the reactions between carbon monoxide and oxygen; hydrogen and chlorine; hydrogen chloride and ammonia, and on the composition of ammonia, and in 1808 formulated a proposition, later accepted, on the combining proportions of gases.

His principal colleague was Louis Jacques Thénard. With Thénard (who, born of peasants, studied pharmacy, and was later created a peer of France), he discovered a method of isolating sodium and potassium (first isolated by Humphrey Davy) from soda and potash with the use of incandescent iron filings—the basis of a commercial method. They also isolated boron (called *bore*) from boracic acid, and boron fluoride. In 1808 Gay-Lussac first recorded the properties of iodine, a substance that had been obtained from kelp. He also described iodic acid.

Discovery of Cyanogen

In 1815, in researches on prussic acid, he discovered cyanogen—the first known “compound radicle.” Gay-Lussac used to celebrate successes by waltzing round the laboratory—a proceeding that astonished Liebig when the two workers established the composition of fulminic acid (published 1824). Among other claims to fame, Gay-Lussac was the first to prepare ethyl iodide. He also investigated sulphovinic acid and grape sugar. Later he studied fermentation, and devised a system for estimating alcohol in aqueous spirits with the use of a centesimal alcoholometer he had invented.

In his later work Gay-Lussac directed his talents to commercial developments, improving, for example, the methods of manufacturing sulphuric acid and oxalic



Balloon ascent of Gay-Lussac and Biot, 1804.
(Illustration by courtesy of the Academic Press Inc.
125 East 23rd Street, New York, U.S.A.)

acid. In 1829 he was appointed official assayer to the French mint, and later took an interest in a large glass manufacturing plant. He applied volumetric analysis, which he had devised, to the estimation of potash and soda, using a standard acid solution; of chlorine in bleaching powder, using arsenious acid; and of silver, with chloride. He published 148 papers in the *Annales de Chimie et Physique*, which he edited.

Gay-Lussac was a member of a consultative committee on arts and manufactures set up by the Ministry of Commerce. In 1809 he succeeded Berthollet as professor of chemistry at *Ecole Polytechnique*. In 1818 he was attached to the administration for gunpowder and saltpetre, and held the chairs of chemistry at the *Musée d'Histoire Naturelle* and the *Collège de France*, of physics at the Sorbonne (1808-32), and of chemistry at the *Jardin des Plantes*.

In 1831 Gay-Lussac became a member of the Chamber of Deputies, and in 1839 was created, by Louis Philippe, a peer of France. After the Revolution of 1848, he decided to end his days quietly among his family and in study. He died from atrophy of the heart—a condition he had belittled.

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First Post-War "Annual Special"

WIDELY recognised in former days as something outstanding and even unique in pharmaceutical journalism, the Annual Special Issues of THE CHEMIST AND DRUGGIST were obviously, amid the austereities imposed by total war, too much of a luxury to survive. The series ended in 1941.

With this issue we are happy to announce the first of a new series. We leave to subscribers to pronounce whether it bears comparison with its forerunners, though we feel confident that all will appreciate the efforts that have been put into overcoming what is—in this connection—a handicap, namely, a small page size.

Of the pre-war series the special character and flavour derived, no doubt, principally from the wide range of subjects covered. Departing from the strictly practical and utilitarian, they catered for ancillary interests of readers—historical aspects of the craft, sources of its commodities, the practice of pharmacy in other lands, and so on. That character and that flavour we have tried to recapture. To that end we give the point of view of an American pharmacist, outline current pharmaceutical politics in Australia, and revisit

London hospital pharmacy after twenty-five years. We delve into history in accounts of seventy-five years' development of the Pharmaceutical Society of Ireland and of the twenty-five years' growth of the Pharmaceutical Society of Northern Ireland, as well as in a note on Gay-Lussac (who died a century ago). We go overseas on a sight-seeing tour of Grasse, and lin-

ger in Britain on a fact-finding visit to South Wales. America is shown in an unusual aspect—that of a soil where grows the off-shoot of a British manufacturer.

Glasgow's advantages as a Pharmaceutical Conference Centre are presented in eight pages of photogravure. Scientific progress is reflected in reviews of the methionium compounds, of developments in tropical medicine, of current veterinary therapy, and of the materials of modern perfumery. A shop designer roughs out his ideal pharmacy, and an attempt is made to do brief justice to the chemist as a stage character.

Finally, there are the numerous and varied advertisements, many in colour, which may be turned to at will for profit, and it may be even for further pleasure.

Slow Progress to Cylinder Safety

EVERY advance towards eliminating the risk of interchange of medical cylinders in anaesthetic apparatus is to be welcomed, but it cannot truly be said yet that the position and prospects in this country are altogether reassuring. The "long-term policy"—as it is called—of the manufacturers and anaesthetists may eventually provide the desired automatic safeguards, and the "short-term policy" may be the maximum capable of being implemented at the present time. But deaths have been occurring over far too many years already, and the announcement of a date by which all obsolete apparatus should have been replaced by standardised non-interchangeable couplings ought to have been made.

In a statement issued earlier in the year jointly by the Association of Anaesthetists of Great Britain and Ireland and the Medical Defence Union and published in the medical Press, there were references that may arouse a little uneasiness among all who have tried, some of them for a long time, to speed the day when reforms that seem so obvious should be completed.

"It is eminently desirable, however," runs part of the statement, "that these couplings should be adopted by international agreement, which has not yet been obtained. There is also disagreement internationally as to the colouring and marking of cylinders." Frankly, we do not like the inclusion of that "however,"

which seems unnecessary unless its purpose is to provide an alibi for further inaction.

On the other hand, if the disagreement as to colouring and marking arises from the refusal of other countries to accept the markings standardised in this country under B.S. 1319:1946 on the grounds they are not distinctive enough, we hope those countries will continue to resist. For, as we have pointed out all too often, the British markings permit nitrous oxide cylinders and oxygen cylinders to be easily confused, yet most of the fatalities have arisen from giving further nitrous oxide under the impression that oxygen was coming through the tube. In some other countries they order these things better. In South Africa, for example, the nitrous oxide cylinder is aluminium-coloured, and the oxygen white. In Britain both are black, though the oxygen cylinder is "distinguished" by the shoulder which—when new—is white. The memorandum of the two bodies referred to "strongly recommends that non-interchangeable couplings for medical gas cylinders . . . be introduced at the earliest possible moment." Representatives present at the joint meeting resolved "that those present should meet again in four months' time to receive reports on the progress of the steps taken." Almost three of those four precious months have slipped by without any progress being reported in the medical Press or in Hansard, and unless concrete results from behind-the-scenes activity are shortly to be revealed it is all too likely that the "steps taken" remain few and faltering. **THE CHEMIST AND DRUGGIST**, which welcomes in the Anæsthetists' statement much for which this paper has consistently campaigned, will continue to press for the fullest safeguards with the least lapse of time.

Endorsement in Full

WHATEVER local rumblings may have threatened the National Pharmaceutical Union Executive since March 16, when the Minister of Health first announced his cut to 16 per cent. in oncst percentage, they had died away before the Conference of Pharmaceutical Committee representatives met in London on June 15 (p. 796). There was nothing stormy in those proceedings, unless it was thunderous applause to show

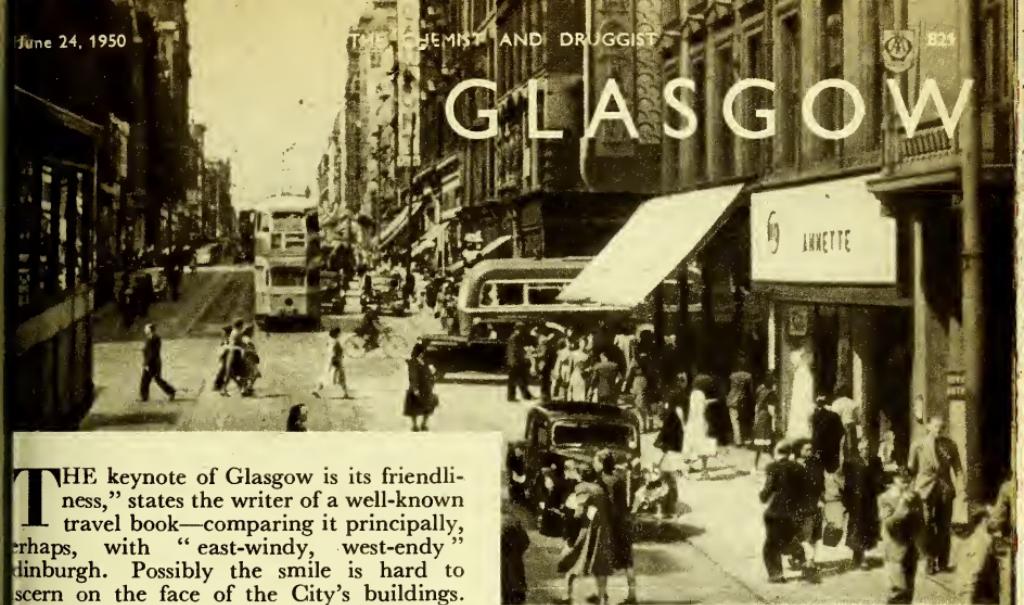
representatives' endorsement of their leaders' actions or renewing their vows of allegiance to the present negotiating bodies (the staff side of the Whitley Council for the terms of contract and the Central N.H.S. (Chemist Contractors) Committee in all N.H.S. matters not within the orbit of the Whitley Council).

The solidity of representatives was, in fact, impressive, and the N.P.U. Executive and its associates may feel both heartened at the forthright approval of its action hitherto, and emboldened in its attack on the two principal salient points that have now to be reduced—the Minister's present power to revise the terms of contract after purely nominal "consultation" with the contractors' representatives, and his choice of the effects instead of the cause of increased costs in the pharmaceutical service as the object of his onslaughts.

Record Chemical Exports

EXPORTS of chemicals, drugs, dyes, etc., in May were valued at the record figure of £8,508,103, which was more than £233,000 above the previous record in March of this year. The value of exports in the group in May 1949 was £8,091,749. Exports of chemicals to India, valued at £951,012 (£1,356,756 in May 1949), were higher than for some months, and that country is still by far the principal market for British chemicals. The value of exports of manufactured medicines reached a peak at £1,178,619, and has been exceeded only by the figure of £1,790,996 for the corresponding month a year ago. Exports of proprietary medicines were only moderate at £392,521, when compared with the May 1949 record figure of £542,873; to India, exports in this section were down to £31,017, against £211,571 a year ago. Quinine and its salts shipped in May were valued at £31,745 (£32,726) and exports of aspirin amounted to 210,057 lb., valued at £44,660 (against 116,871 lb. and £39,891). Insulin exports increased to £55,270 (£33,283) and penicillin to £217,338 (£209,415). Ointments and liniments exported were valued at £56,078 (£88,897); and shipments of British insecticides, weedkillers, sheep and cattle dips, etc., were valued at £271,448 against £248,110 in May 1949.

GLASGOW



THE keynote of Glasgow is its friendliness," states the writer of a well-known travel book—comparing it principally, perhaps, with "east-windy, west-endy" Edinburgh. Possibly the smile is hard to discern on the face of the City's buildings. The architecture "strikes harshly on an eye accustomed to more colourful stone and less angular contours. . . . But there is a strength and dignity about these stark buildings that is exhilarating and extraordinarily revealing of the Scots character, inasmuch as the exterior gives no indication of the astonishing warmth and cosiness within."

Warm and reassuring is the welcome Conference visitors will have from their hosts, the pharmacists of Glasgow. They will learn that the City is a centre of an active culture, half-hidden under a modesty that repays penetration by those who visit the City.

Though Glasgow disputes with Birmingham the claim to be the second city in the British Isles, its link with antiquity is not strongly apparent. Owing to clearances of many old structures in the face of expanding industry, few ancient buildings remain.

Glasgow University

The University, it is true, celebrates 500 years of existence next year, and Conference visitors will enjoy in advance some of the reconstruction and redecoration that are being carried out for the commemoration (including new colour and lighting effects in the famous Bute Hall, where a Conference reception is being held).

The origins of the University lie in a Papal bull granted at the behest of the then Bishop of Glasgow, William Turnbull, by Pope Nicholas V on January 7, 1451. By the terms of the Bull there was established at Glasgow a *studium generale* for the study of theology, canon and civil law, the arts and "every other lawful faculty" (*quavis alia licita facultate*).

Built in 1460, the College remained for two centuries the seat of the University. A new College of Glasgow was completed by about 1660. In the changed conditions of the nineteenth century the old College became hopelessly inadequate in size, and was also isolated in a rising surge of industrial activity and clamour. So in 1864 the site was sold. With the proceeds, supplemented by donations, some of the present buildings were erected at Gilmorehill, one of the seven hills on which Glasgow, like Rome, has grown up. Since 1864, expansion in the number of students, especially in the scientific departments, has called into being a whole range of new buildings, which are even now being added to (an atomic research building, complete with synchrotron, is one of them). In his design for the University, Sir Gilbert Scott incorporated two handsome portions of the former College of Glasgow: the Pearce Lodge and lion-and-unicorn staircase (illustrated on p. 825), which were re-erected entire.

From the commanding forecourt of the University there is a noble prospect of the City and the Clyde, its line picked out by cranes, with grey hills beyond. Closer in are the Art Gallery, Kelvin Hall, Royal Hospital for Sick Children (the largest children's hospital in Britain), Western Infirmary, and the City's many spires.

In the University's stately Bute Hall are treasured the old original mace, apparatus used by Watt, Newcomen's steam-engine, a world-famous collection of Whistlers, and above all, the Hunterian collections (anatomical specimens and his *objets d'art*).

Imaginative callers may conjure up within the University precincts visions of some of its great figures of the past—Lister and Macewen in surgery, Cullen and Black in chemistry, Sir Robert Muir in pathology, Lord Kelvin in physics, to name but a few.

Present students at the University number over 7,000, including a modest quota of pharmacy students. The first British University degree in pharmacy was instituted in Glasgow, and its first holder (Mr. William H. Millar, now managing director of a factory at Johannesburg) graduated in 1927. That the degree exists at all is due to the pioneer efforts of two outstanding Scottish pharmacists—the Glaswegian Daniel Frazer, and the Pharmaceutical Society's former (and famous) resident secretary in Scotland, J. Rutherford Hill. In 1903 Frazer and Hill persuaded the University authorities to institute an ordinance for a degree of Bachelor of Science in Pharmacy, which became effective in 1906. In 1931, an amendment to the original ordinance was given effect, taking into account the changed circumstances of the time. To understand the long dormant period it is necessary to turn attention for a moment to another institution that has made considerable contributions to Scottish science and technology: the Royal Technical College.

Prototype of Technical Colleges

The Royal Technical College is one of the largest single buildings in these islands entirely given over to the purposes of education. Its corridors alone, one is told, total two miles in length. The College, as at present constituted, resulted from the amalgamation in 1886, by an Order in Council of Queen Victoria, of several older institutions. One of these, Anderson's College, was the prototype of all technical colleges. Founded in 1796, it opened its portals to students of all

Showroom of British Chemicals and Biologicals, Ltd.,
at 65 Berkeley Street, Glasgow, C.3.

classes, and was indeed "the first regular institution to admit the fair sex to the temple of knowledge on the same footing with men" as well as the first in Britain to open a chemical laboratory for public instruction. One of its early professors, Dr. George Birkbeck, later became the founder of Mechanics' Institutes that were a feature of nineteenth-century life in England as well as in Scotland. Graham, whose work on gaseous diffusion so affects the work of the pharmacist, was also a member of the College. In 1912 the College was made Royal by decree of King George V, and the following year became affiliated for the teaching of Degrees in Science to the University of Glasgow.

Pharmacy was not at that time one of the subjects on the curriculum. There had been training classes for would-be pharmacists, but they were private ventures. After the 1914-1918 war H. P. Arthur and other prominent Glasgow pharmacists approached the governors of that Royal Technical College with a request that classes should be started the twelve months after their establishment, present head of the School was appointed. Under him the department went rapidly ahead. He took energetic and successful steps to turn the "paper" degree in pharmacy into a reality, and in doing so became Professor of Pharmacy at the College, where he is now universally—and affectionately—known as "Prof. Todd."

To date there are approximately eighty holders of Glasgow's pharmacy degree, and also a number of holders of higher degrees. In 1934 the University instituted an Honorary degree in pharmacy; it was the first in Britain. Students at the Technical College are expected to specialise in an aspect related to pharmacy such as bacteriology or pharmacology. The school occupies a prominent place in the life of the city, and in its premises the Blood Transfusion Service of the West of Scotland, of which Professor Todd acted as regional director and is still chairman, was developed during the war years. Research work in relation to pharmacy is actively carried on at the school by a group of about twenty young research workers. The close liaison between the school and the clinical work of hospitals is evidenced by the appointment of Professor Todd as Consulting Pharmacologist to the Western Regional Hospital Board. The school is also widely known for its work on the treatment of burns and skin-grafting.

In the organisation of pharmacy North of the Border, Glasgow plays a part without parallel in England. The area of the Glasgow and South-western Scottish Branch of the



sity covers the counties of Glasgow, Dumbarton, Renfrew, Lanark, Ayr, Dumfries, Cumbria and Wigtown. The secretary (Mr. Andrew Officer) sends out 1,400 notices to members eight or nine times a year about branch meetings, and spends an occasional week travelling to Dumfries (seventy miles away) or Ayr (thirty) for a "district" meeting. The pharmacists of Stranraer, Oban, Argyll and other outlying parts have voted to continue in association with the City rather than assert their independence.

Branch of the Pharmaceutical Society

The Branch was formed in 1923. It is managed by a committee of eighteen, plus the office-bearers. The chairman (Mr. S. McHughan) and the secretary are chairman and secretary also of the Conference Local Committee, 1950. Six or seven meetings are held annually within the City (usually for the discussion of current problems, the subjects ranging from crime detection to blood transfusion) and one or more district meetings at places outside. In the past two years the Branch has devoted substantial time to the discussion of National Health Service matters, and takes a keen interest in pharmaceutical education. When members' enthusiasm for a Branch prize fund came to the notice of Messrs Taylor (Trongate) Ltd. (see p. 828), the company made a contribution to the fund of £300 annually, tax-free for seven years. In addition to that sum the Branch decided, in 1949, to have its own Prize Fund subscribed by members. To date it has £400 to its credit and seeks further contributions. When the Branch chairman presides at a meeting he wears a handsome badge of office presented to the Branch by the Ladies' Committee of the 1950 Conference. The Branch numbers amongst its members five members of the Scottish Department Executive: Messrs. Spence Culbert, A. B. Gilmour, McHughan, R. MacAdam and A. Murray.

Glasgow is the seat of the Scottish Pharmaceutical Federation, the nearest counter-north of the Border of the National Pharmaceutical Union in England and Wales. The Federation exists for the legal defence of pharmacists in Scotland, for insurance against accidents, etc. It holds a watching brief also on the Pharmaceutical Standing Committee for Scotland. The president for the year is Mr. Spence Culbert, Airdrie. Mr. Andrew Officer (Conference local secretary) is vice-chairman, and Mr. H. Graham Macmillan is secretary and treasurer.

Under the National Health Service there are 360 contractors in Glasgow, con-

trolling 415 shops in a city of a million and a quarter population, are represented by the Glasgow Pharmaceutical Committee. The Committee was probably the first body in Britain to recognise the importance of the figure of "frequency of medicine" in pharmaceutical remuneration, and focussed attention on the "limitation of profit" clause where large quantities of medicine were concerned. The Committee maintains unceasing pressure to ensure that, at the pricing bureau and local Executive Council, efficiency is maintained at the highest possible level. Suggestions have been submitted to the Executive Council to expedite interim payments, and it is hoped that the suggestions will prove effective when adopted.

The Glasgow and West of Scotland Branch of the Guild of Public Pharmacists was formed in 1942 and now has a membership of well over sixty. The highlight of its recent activities has been the branch discussions on the salary negotiations, but educational activities, film shows, and talks by eminent authorities on a wide range of subjects have all been well attended. Close liaison is maintained with the Edinburgh branch.

A Recently Formed Association

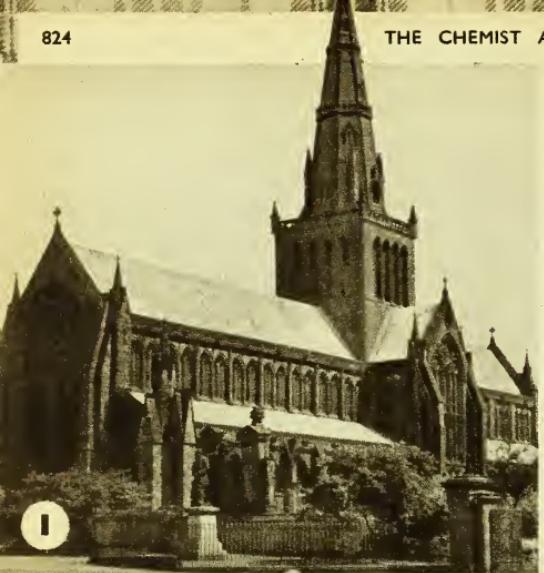
At a meeting in St. Andrews Halls, Glasgow, on December 15, 1949, it was decided to form an Association of Glasgow Pharmacists. A committee of twelve was appointed, and the committee formulated a draft constitution which was presented at a meeting on February 2, 1950. After discussion, the draft constitution received approval, subject to minor alterations. The Association aims to hold regular meetings for discussion on all matters pertaining to the practice of pharmacy. The present office-bearers are: President, Mr. R. F. Mackay; vice-president, Mr. R. Birrell; treasurer, Mr. J. D. Mair; secretary, Mr. D. R. Brodie, 1432 Gallowgate, E.1.

The Glasgow Pharmacy Club co-ordinates the sporting activities of pharmacists in the City. It has sections for golf, bowls, cricket, football, etc. The secretary is Mr. A. G. Bannerman, 34 Southbrae Drive, Jordanhill, Glasgow, W.3.

In the City—at Woodside Terrace—is housed the Drug Accounts Committee



Filling infusion fluids at the Western Infirmary, Glasgow



1



2



3

(Scotland) which is responsible for examining, scrutinising and pricing all prescriptions dispensed in Scotland under the National Health Service. The office and sub-offices at 27 Ebank Crescent, Glasgow, C.2, and 22 R Street, Edinburgh, 2, are under the control of a pharmacist (Mr. W. A. Beattie, M.P.F.C.S.) with a wide and varied experience in wholesale, manufacturing and retail pharmacy both North and South of the Border. In the first year of the Service it handled fifteen million prescriptions and individually priced seventy million items. To do so, it made fullest demands on its staff of eighty (thirty-five of them skilled pricers). Even so, the bureau is much in arrears, as contracts know to their cost. Efforts at recruiting are continuous, but the office is in competition for labour with more colourful and more highly paid occupations. Scottish pharmacists can at least be sure that at the head of the bureau they have a colleague whose keenness could hardly be greater. Mr. Beattie compiled his own list of proprietaries well before there was any suggestion that such a service might be made available for all pricing offices.

Pharmaceutical Services

Before the National Health Service came into operation in 1948, the Corporation of Glasgow had developed a large and efficient supply organisation for servicing its hospitals and clinics. Under the Act some rearrangement of responsibility was called for. The Corporation's chief pharmacist (Mr. S. Home) became chief pharmacist to the Western Regional Hospital Board, which administers approximately 240 hospitals in eleven counties from Oban to the Solway Firth. In that capacity he is the Regional Board's adviser in respect of medical supplies.

Since N.H.S. came into effect the Public Health Department of the Corporation of Glasgow has established a supply dépôt under a pharmacist (Miss M. S. Sutcliffe) which provides for the needs of the City's maternity, child welfare, and school clinics, etc.

The Western Infirmary, Glasgow, is situated on grounds that adjoin those of Glasgow University, and the Infirmary is, in fact, one of the largest medical teaching hospitals in Britain, with an annual intake of over 100 medical students. The requirements of the hospital wards and theatres are supplied by the pharmaceutical department, which is responsible for supplying drugs, dressings, instruments, x-ray films and solutions, etc., for the radiological, radiotherapy, physiotherapy and ophthalmic departments, and to the Gardiner Institute of Medicine, with attendant research units. The department

1. Glasgow Cathedral (St. Mungo)
2. Buchanan Street
3. A Clyde river steamer
4. Kelvingrove Museum and Art Galleries
5. Lion and unicorn stairway at University
6. Glasgow University
7. City Chambers, George Square
8. Gilmorehill Lodge (Students Union)
9. Kelvin Hall
10. Bute Hall, Glasgow University





SOME GLASGOW PHARMACIES: 1, W. Spence Culbert, Airdrie; 2, Frazer & Green, Ltd., Buchanan Street; 3, W. Wood Wilson, Ltd., Great Western Road; 4, J. P. Grieve, Holmlea Road; 5, Architect's drawing for new front, Charing Cross branch of Frazer & Green, Ltd. (installed in honour of Conference)

housed on three floors. In the lowest are stored dressings, drugs, ligatures, glassware, etc. On the ground floor is the main dispensing room with small-scale manufacture of various stock preparations and test-room solutions. On the uppermost are situated the office and the sterilisation unit. The latter, the most recent addition to the department, had its origin some two and a half years ago in the meeting of a special committee set up to consider the possibilities of a centralised sterile syringe service. The chief pharmacist (Mr. T. Morrison) was authorised to design the new laboratory, install the necessary equipment, and engage any additional staff required. The unit consists of four rooms, three of them sealed off—the main laboratory, where preparation of the sterile products is carried out, and two smaller rooms, one reserved for the preparation of penicillin and streptomycin solutions, ointments, etc., the other a store for all sterile products, sterile apparatus and containers.

The Glasgow and West of Scotland Blood Transfusion

Service provides blood, plasma and other blood products to all hospitals in the West Region. The area served is large, extending from Dumfries in the South to Oban in the North and as far East as Clackmannshire. The population in the region is nearly three millions, and the number of hospitals served is about 200, requiring an intake of about an average of 500 pints of blood a week to meet all demands made for whole blood and plasma. The blood is collected mainly by mobile units, which visit all parts of the Region, collecting from volunteers in the towns and villages. The routine work in the laboratories consists mainly in determining the blood groups of donors in the ABO and rhesus systems. Routine determinations are also made of the blood groups of women attending the ante-natal clinics in the Region. The work of the dépôt is controlled by the Regional Director, Dr. John Wallace; the Deputy Regional Director is Mr. G. R. Milne, Ph.C., with Mr. G. M. Todd, Ph.C., D.B.A., as chief technician. Mr. Milne is an active member of the local branch of the Pharmaceutical Society and assistant secretary to the Glasgow Conference Committee.

Glasgow Pharmacies

Pharmacies listed under Glasgow in the Register of Premises total 358. Among them are some that would challenge comparison with any in these islands.

The pharmacy of Frazer & Green, Ltd., Buchanan Street, for example, is one of the most distinguished in Scotland. Founded July 1, 1830, the business has had three removals—all within the street, settling in the present premises in 1884. A description of the early days has been permanently recorded in "The Making of Buchanan Street," by Daniel Frazer. The record shows that cash sales for the first six months averaged less than £20, and on only two days during the six months did the day's sales amount over £2. Among names in the books 1830–31 is that of J. & J. Maw, forerunner of S. Maw, Son & Sons, Ltd. At one period medical students used to take their tuition in the pharmacy at the shop, and among famous men who did so were Professor McCandless Anderson, Dr. Buchanan (son of the late Professor Andrew Buchanan), Rev. L. Stewart, of Lovedale, the two young Drs. Turner, of Samoa, and—at a very early period—Sir Lyon Playfair, M.P. (Professor of Chemistry, Edinburgh University). The business is still an important training ground and claims to have produced more pharmacists and trained more students than any other pharmacy in the country. Today there

siness is a limited company with Mr. George Stewart, M.P.S., as managing director. It has four branch businesses in the West End of the City, at one of which (Charing Cross, close proximity to St. Andrews Halls, where the Conference meetings are to take place) a new modern shopfront is being installed in honour of the Conference (p. 826). The business of Matthew Carmichael, Ltd., was founded by the late Mr. Matthew Carmichael in 1894 at Crossmyloof, Glasgow. In 1902 he opened a branch in Kilmarnock, and, and on the introduction of the National Health Insurance scheme in 1912 took over premises in Pollokshaws, previously used as a doctor's surgery and dispensary. On the death of the founder in 1927 the business was turned into a limited company with Mr. C. Carmichael, a member of the Pharmaceutical Society since 1933, as managing director. Two other branches were opened later. Mr. Carmichael is taking part in the preparatory work for the Conference.

Mr. W. Wood Wilson, M.P.S., 147 Great Western Road, took over his business (then a doctor's surgery) in 1897, and converted it to a limited company in 1948.

The pharmacy of Mr. W. Spence Culbert (p. 826), at Airdrie, a few miles from Glasgow, was established in 1860. It was acquired by Mr. Culbert in 1911, and he continued at that address until 1924, when he built new premises at 11-15 Stirling Street and transferred the business to that address. The dispensary is on the lower floor, with wroom and stock rooms above. A new dispensary was fitted up last year.

Boots, Ltd., have twenty branches in the city—the largest of them at Sauchiehall Street and at Argyll Street and Union Street corner (a day and night shop).

Pharmacies Owned by Women

Miss M. Arthur is the proprietor of the business founded in 1900 by her father, the late Mr. Harvey P. Arthur, at 361 Victoria Road, where she served her apprenticeship. She is a member of the Ladies' Committee.

Mrs. Janet M. Gardner, proprietor of the pharmacy of McLean & Gowans, 556 St. Vincent Street, Glasgow, served her apprenticeship with the late Mr. Hugh Gemmell, Drossan, and qualified from the Royal Technical College, Glasgow. Since her husband's death (in 1943) she has been carrying on his business in a busy working-class district. Mrs. Gardner has been a member of Glasgow Pharmaceutical Committee for past three years.

Miss S. A. G. R. Girvan, 43 Bentinck Street, Glasgow, C.3, is the only woman

proprietor pharmacist in the centre of Glasgow, where she has been in business for over twenty years, since shortly after qualifying. Miss Girvan writes: "I am accustomed to quick and busy counter trade . . . though I loved the old *secundum artem*."

Miss J. P. Grieve, M.P.S., 365 Holmelea Road, Cathcart, Glasgow, S.4, served her apprenticeship with the late Mr. J. Grant, 369 Eglinton Street, Glasgow, and when Mr. C. Finlayson purchased the Crown Street branch she remained as assistant. In partnership with Mr. Finlayson she opened a branch at 13 Morrison Street, Glasgow, and in 1924 she took full control. In 1932, Miss Grieve sold that business and acquired her present one, where she has been for seventeen years.

Miss Marion L. Twaddle, M.P.S., 584 Cathcart Road, Glasgow, served her apprenticeship with Balfour Reekie, Hamilton, and also worked for a short time in the pharmacy of Mr. John H. Ramsay, Glasgow. In 1939 she took over her present business. She is a member of the Ladies' Committee.

Glasgow Wholesalers

There are a number of wholesale druggists in the City. Behind the distributing business of W. & R. Hatrick, Ltd., 158 Renfield Street, is a history of great family enterprise. In the first quarter of the nineteenth century William Lindsay Hatrick, dissatisfied with the prospects offered him as an

Four generations at New Apothecaries Co., Ltd.: 1, Mr. William Greig I (1824-70); 2, Mr. William Greig II (1870-1933); 3, Mr. William Greig III (1890-1928); 4, Mr. William L. Greig (1928-). 5, Mr. George Stewart (managing director of Frazer & Green, Ltd. (see opposite)



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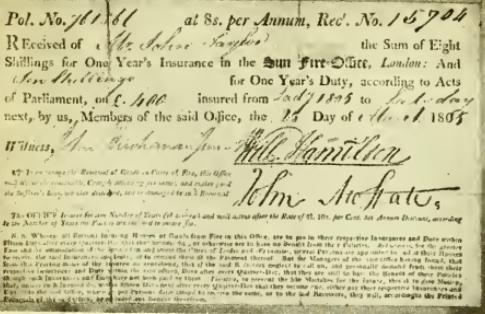
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Insurance receipt, dated 1805, in possession of the directors of Taylors (Trongate), Ltd.

assistant with the Glasgow Apothecaries Co., set up on his own as a wholesale and retail chemist and druggist in a central position in Paisley. Later, in partnership with his eldest son, Robert Robb Hatrick, Ph.C., as W. & R. Hatrick & Co., he secured warehouse premises in Turner's Court off Argyle Street, Glasgow, and concentrated on the manufacturing and wholesale trade. After several moves the firm settled in Renfield Street. Following a disastrous fire in January 1808, a new and improved building was erected on the site. The whole internal structure of the building was modernised, with steel counters and shelving, electric service hoists to each department, Dictograph communication throughout the building, etc. The management of W. & R. Hatrick, Ltd., is under Mr. Peter Shields, M.P.S.

If it is not unique among business concerns in the British Isles, the New Apothecaries Co., Ltd., 59 Glassford Street, Glasgow, is certainly in a distinguished minority in having remained for over a century and a quarter under the management of a single family. The original managing partner, Mr. William Greig, joined the business fresh from an apprenticeship with the Glasgow Apothecaries Co. There were seven other partners, all of them leading physicians of the City, among them Professor Rainy and Drs. James Watson and A. D. Anderson (father of Sir Thomas McCall Anderson). The address was then, as now, Glassford Street, and the date of foundation, May 15, 1824. William Greig was succeeded in 1870 by his twenty-five-year-old-son—also Mr. William Greig—who assumed sole control by buying out his partners, and "reigned" for sixty-three years until his death in 1933. The third William Greig, a grandson of the first, predeceased his father by five years. Upon his death in 1928, his son, Mr. William Lang Greig, took his father's place in the business. In 1933 the

business was converted into a limited company, with Mr. W. L. Greig as managing director. For the past eighteen years Robert Lindsay has been associated with it as a director. In 1946 an agreement was reached with Evans Medical Supplies, Ltd., under which the company became agents for Messrs. Evans in the West of Scotland. W. L. Greig will become known to many Conference visitors as convener of the finance subcommittee of the local Conference Committee, in which capacity he has been highly successful in raising the necessary funds.

Forty-eight years ago (three-quarters of a century after its foundation in Edinburgh) the business of T. & H. Smith, Ltd., opened a Glasgow distributing centre. In 1919 the company acquired the 114-year-old Glasgow Apothecaries Co., completely rearranged the internal layout of the premises, and centred its distribution there, closing the Washington Street dépôt. The move to the present Virginia Street site was made in 1910, when new premises became necessary on account of the size of the business. Enlarged in 1936, the premises were entirely rebuilt after a fire in 1878. The building comprises five stories above basements. The resident director is Robert Graham, M.P.S., F.G.S. Recently the company opened a modern factory at Chapelhall, near Airdrie, where packaging is done for the distributing branches.

Established 1805 or Earlier

The wholesale chemists' business of J. Taylor (Trongate), Ltd., 132 Trongate probably the oldest of its kind in Glasgow was certainly in existence in 1805, as shown by a receipt shown above for a fire insurance premium paid on March 25, 1805. The business has occupied premises on the site, in the very heart of the old City, for past 100 years. A rebuilding before 1939-45 war gave the premises a modern setting. The goods handled cover drugs, galenicals, "ethicals," proprietaries, packaged goods and sundries. Recently a showroom was opened where all the latest best in chemists' sundries are displayed. It serves country customers a unique show and travels the length and breadth of Scotland carrying a comprehensive display of goods.

Youngest of the wholesale drug distribution of Glasgow, the business of Brown, Gray & Co., Ltd., nevertheless dates back to 1821 when it was established as a partnership between John Gray and Joseph Brown. In 1921 it was converted into a limited company of which the present directors are William Brown and Lawrence Gray. The business mainly in "patents," drugs and sundries.

*All the world's a stage,
And all the men and women*



MERELY PLAYERS



George Ralph as Subtle
in the Old Vic Co.'s
production of Ben Jonson's
"The Alchemist."

THE chemist, constantly in contact with every type of character that appears on the world's stage, and handling mysterious and potent commodities with apparent casualness, would seem essentially a figure of drama. How does he fare on the stage? What use have the playwrights made of him?

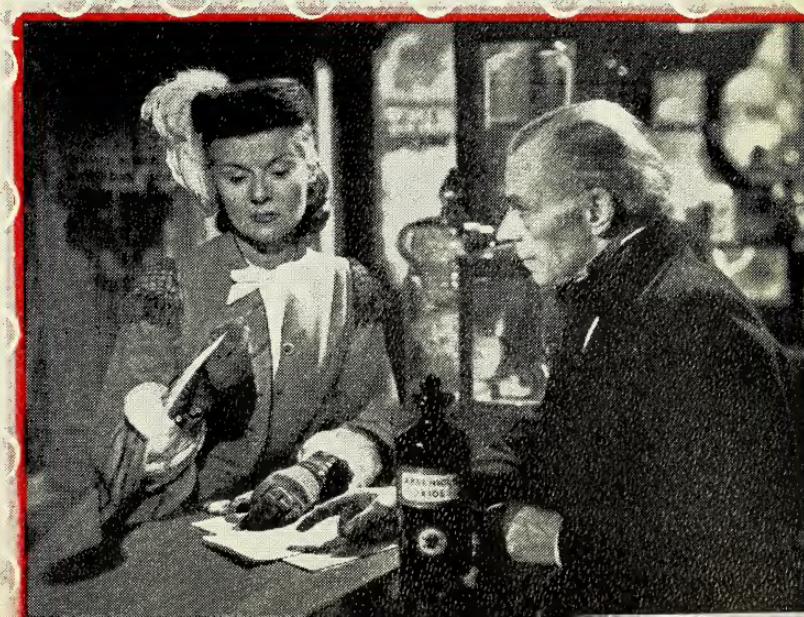
Curiously little. In the DRAMATIS PERSONAE, his is rarely a major part. In a poisoning play he is commonly brought in as an indispensable but minor ancillary. Often he is made grasping, calculating, lacking in humour or merely colourless. Seldom is he a sympathetic character.

Chemists as Characters in Plays or Films

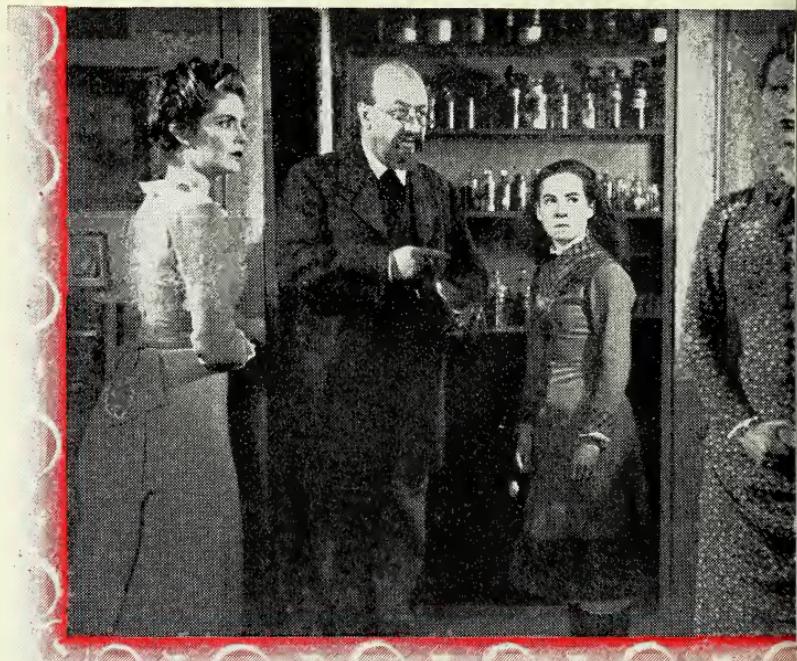
Jonson debunks his ancestor the alchemist. Molière ridicules his immediate fore-runner the apothecary. Shakespeare treats of an apothecary in a brief but brilliant sketch, but does not cause him to appear before the footlights.

In more recent times, perhaps the best known stage appearance of a pharmacist has been in Roland Pertwee's (later filmed) play, "Pink String and Sealing Wax." Pertwee, with a pharmacist in the family, was at home with the setting. His chemist, Strachan, a stern and dictatorial paterfamilias of the Victorian era, frowns on the desire of his son Albert to become an engineer instead of entering the family business. Under the education of events, the disciplinarian gives way, allowing his offspring to choose their own careers.

Ann Todd in the title rôle and Ivor Barnard as Mr. George Murdoch, Ph.C., in the Cineguild film Madeleine."



**Gene Lockhart as
the pharmacist
Homais, and Jen-
nifer Jones as
Madame Bovary
in the Metro-
Goldwyn - Mayer
film of that name.**



In a recent film, "Madeleine," based on the famous trial of Madeleine Smith, which took place nearly a century ago, the chemist figures as the seller of poison. Madeleine is charged with the murder of her lover by poisoning him with arsenic. The chemist is seen getting her to sign the poisons register. Later, in court, he testifies to the common use of arsenic for cosmetic purposes. In another scene a page-boy sent by Madeleine to another pharmacy for prussic acid is shown being

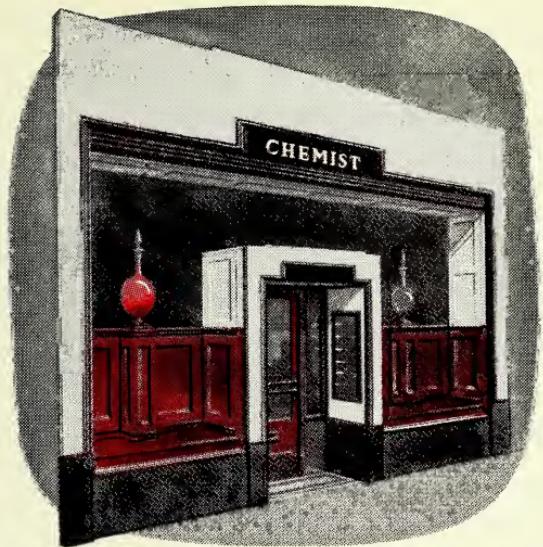
refused supplies, and the pharmacist is seen at work in his back room.

In Gustave Flaubert's novel "Madame Bovary" which has been staged and more recently filmed, Monsieur Homais and his chemist's shop occupy important parts. Homais is pompous and stingy, and self-styled authority on many subjects. When, for example, his knowledge of agriculture is called in question, he replies: "Certainly I understand it, since I am a druggist—that is to say a chemist. An the object of chemistry being the knowledge of the . . . molecular action of a natural bodies, it follows that agriculture is comprised in its domain. From Homais' shop Mme. Bovary steals the arsenic with which she decides to end her troubles.

In Ben Jonson's famous comedy "The Alchemist" the chief character (Subtle) cheats and deludes the gullible by holding out to them promise of the "philosopher's stone." A recent revival of the play in London by the Old Vic company gave a renewed hint of the rich vein of dramatic material that awaits the playwright who decides to turn his attention to pharmacists. When shall we have a pharmacist here?



**David Horne as the chemist
Edward Strachan in the play
"Pink String and Sealing Wax."**



Planning a Distinctive Pharmacy

By L. W. Whiteman

(*Shopfittings designer to S. Maw, Son & Sons, Ltd.*)

IN thirty-five years' experience of designing new pharmacies and altering old ones, I have usually been requested at the outset to design a shopfront that stands out in design against the shopfronts of other traders in the same street and is different from those of nearby chemists.

Such a request I have always taken up with enthusiasm, hoping that at last my opportunity had arrived to do something unique. All too often, as the negotiations proceeded, the unique features were eliminated, item by item, and replaced, at the chemist's request, by more commonplace ones, with the result that, in the end, the shop has looked little different from all the others in the street. In this article I can give free rein to my ideas.

An average modern chemist's shopfront presents itself as well constructed and of fairly good materials, but lacking in character or carefully thought out purpose. From one to perhaps six display windows usually commence about 2 ft. from the pavement and rise to several

feet above eye-level. They generally contain as many rows of shelves as can be wedged in, all so tightly packed with merchandise that it seems impossible to find space for a single additional article. The effect is of a series of well-stocked cupboards, with glass on the street side. So many of the goods sold by chemists are displayed in the windows of other traders that it is no wonder the average chemist's frontage is practically indistinguishable from those of other traders. Yet, to be effectively displayed, or even noticed at all, goods need ample space above, below, and on either side. Competition is a factor to be reckoned with, but why enter the battle of competition by copying, or even trying to out-do, others in methods of their choice? Striking away into something completely different gives at once a different status. By making it unmistakably clear that behind his shopfront there is a pharmacist, a chemist achieves a competitive effort far stronger than by trying to out-do others in the quantity of



FLOOR PLAN
Scale : 1 in. = 1 ft.

goods put on show (and often barely visible from the street).

In the accompanying illustrations, reproduced from my own drawings, I put forward a way of treating premises of average size—say 18 ft. wide and 31 ft. back to front (with, perhaps, at the rear, additional space for conveniences and a stockroom). A shopfront on the lines illustrated would, I am convinced, command immediate attention, no matter how elaborate and costly the shopfronts of other traders nearby.

What are the distinctive features of the design? The aim has been followed (and, I think, achieved) of giving an unbroken daylight effect inside the shop—an effect heightened by the white enamelled sides and ceiling. Spaciousness is suggested by the wide entrance, with its door set in the centre of a lobby 5 ft. wide and flanked by small inset showcases.

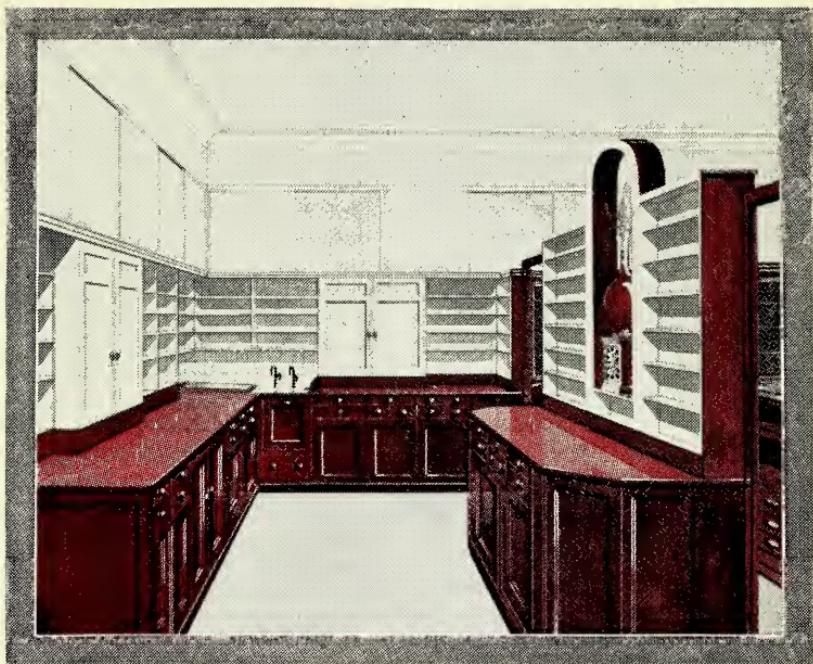
The panel over the entrance is intended for the name and qualifications of the chemist. With the addition of the word "Chemist" or, possibly, "Dispensing Chemist," all in fairly small, well proportioned letters, the wording should prove quite sufficient in almost all circumstances.

The shop window as shown is not intended to house merchandise, but if, as some chemists claim, it is sometimes essential to make a special sales display, the facility is there to do so. An eye-level screen provides the backing to the windows, for closed-in windows would lessen the effect of spaciousness. The illustration features a swan-necked carboy as being more in harmony with the design, but a pear-shaped carboy would serve almost equally well. My suggestion for the materials for the front is bronze and white stone (or faced concrete), with the bases in natural granite, the door and window screens in polished mahogany, and the lettering in cream enamel-filled letters engraved on a bronze plate. The front glass would be in three plates, with butted joints, giving the effect of one large plate.

Inside the shop the chemist naturally wishes to display and show the greatest variety of merchandise. The important feature of my design is that goods are shown only at levels at which they can be effectively seen. To show the goods most effectively, it must somehow be contrived that the display is directly below the eye of the customer as he stands at the counter, and



Arrangement of the counters, stock fixtures and dispensary



Dispensary
and rear
of dispensing
screen

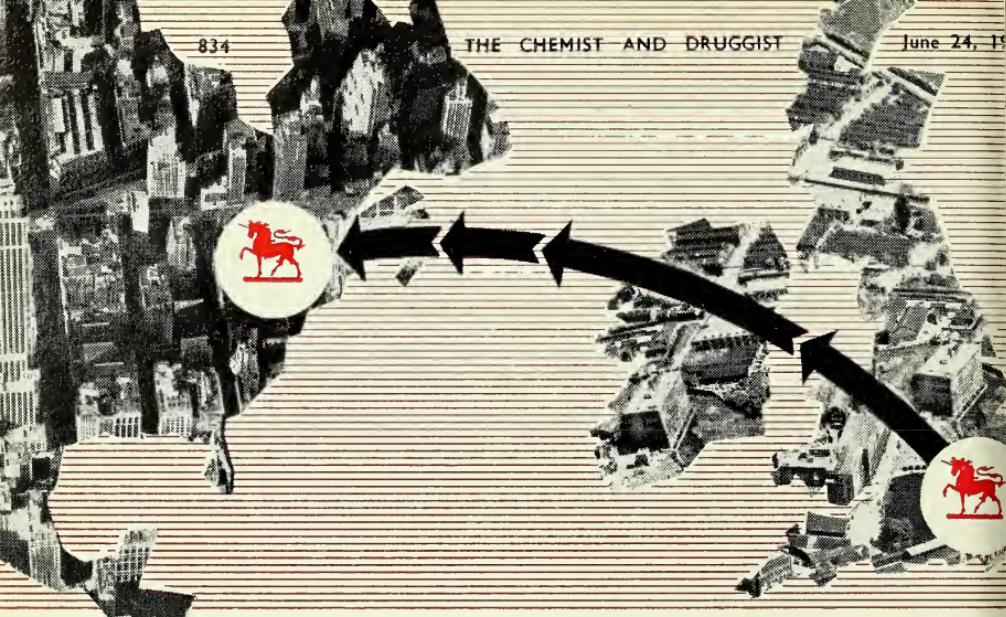
that is made possible by the counter showcases. At all other levels the goods should be under cover.

I have often seen good layouts spoiled by non-matching glass counters, etc., placed in front of wall fittings, or by parcels of goods placed upon them. To ensure that the arrangement remains as attractive as when it is installed, I have designed a complete scheme of counters round the shop, and wall fittings which, in effect, have no roof-top (the face of the work extends right up to the ceiling). Immediately above the display portion of the fittings there would be stock cupboards with sliding doors, operable by the assistant from the floor. The top line of the closed wall fitting would extend the full length of the shop and across the back wall over the dispensary. It would be decorated as part of the top frieze and ceiling. Any windows to be allowed for on the side or back walls could be admirably worked into the scheme, to give full advantage of the additional daylight—though at the loss, of course, of a small amount of stock space.

A common request today is for "ideas for a modern dispensary." Referred to in that way, the dispensary appears to be regarded as a thing apart from the pharmacy. To my mind, whilst larger and

more efficient dispensing arrangements may be necessitated by, among other things, National Health Service developments, the dispensary remains what it has always been—an integral part of the pharmacy. My sketch shows a view of the dispensary from the left. The left wall, which is not shown would, of course, be treated in a manner similar to the right, which is. For present purposes, only the broad outline of a dispensary scheme is illustrated. A number of small adjuncts (desks, water heaters, autoclaves, penicillin screens and, possibly, a sterile cubicle if the chemist has a T.S.A. licence) are omitted: they depend too much on the requirements of the individual chemist. The angle-fronted counters, 3 ft. 8 in. high, and having glass tops, are not intended to have display stands placed upon them. Where additional display becomes necessary it is better to use small glass shelves supported on metal brackets, leaving serving spaces, of course, between them. Preferably, however, the display facilities are part of the design.

Nothing is said here about lighting. It is essential that it should be considered in relation to the positions of fittings and counters, but I write as a designer of fixtures. In conclusion, I would like to pay tribute to my employers for giving continual encouragement and opportunity.



AMERICAN TRANSPLANT

Offshoot, in 1906, from an already twenty-six-year-old and London-rooted parent stock, the New York house of Burroughs Wellcome & Co. today yields rich fruits of independent research to the storehouse of world medicine.

IN Britain, pharmacists have become so accustomed to the setting-up of factories within these islands by American manufacturers of pharmaceutical products that they are liable to regard such enterprises as exclusively a one-way traffic. They are not. At Tuckahoe, New York, a very large works not merely manufactures for the American market the medical specialities of the British company, Burroughs Wellcome & Co., but can take pride in its own independent development—a development, moreover, that has added important weapons to the armamentarium of science.

Yet for over a quarter of a century after Burroughs Wellcome & Co. was established in London in 1880 there was no American house, and another eighteen years were to elapse before the Tuckahoe works was set up.

Burroughs Wellcome & Co. was established at Snow Hill, Holborn, London, opposite the Holborn Viaduct railway station by two American pharmacists. S. M. Burroughs qualified in 1877 and came to London the following year as representative of John Wyeth & Bro., Philadelphia, U.S.A. A year later he terminated that appointment in order to commence trading on his own account, under the style of S. M. Burroughs & Co., as agent for American products, including those of Messrs. Wyeth. He invited to join him as partner his friend Mr. Henry S. Wellcome, and in September 1880 the firm of Burroughs Wellcome and Co. was established. Until that time, and since 1874, the year of his graduation at the Philadelphia College of Pharmacy, Wellcome had been a representative of McKesson & Robbins, Inc. He brought with him to England the sole agency of that company for the whole world except America.

At first, the firm acted mainly as agents for American manufacturers. The machine-coated pill and similar convenient forms of medicament which they brought from America were at that time practically unknown in Britain, and the partners were able to build up a considerable business

in those products. In addition, they were marketing some of their own. Several of the earliest (for example, the Kepler series of malt preparations and the Hazeline range of toilet preparations) remain today among the best known. The firm acquired the patent rights in the Brockedon process. The trade mark Tabloid was registered in 1884, and in the same year the Wellcome Chemical Works was set up at Bell Lane Wharf, Wandsworth. (It was transferred to Dartford in 1889.)

From the earliest days of the business, the importance of research was appreciated. The Wellcome Physiological Research Laboratories (now the Wellcome Research Laboratories) was founded in 1894, and the Wellcome Chemical Research Laboratories in 1896, under the direction of F. B. Power, who had been a fellow-student of Henry S. Wellcome. Other institutions followed. They included the Wellcome Bureau of Scientific Research (now the Wellcome Laboratories of Tropical Medicine) in 1913, the Wellcome Historical Medical Museum in 1913, and the Wellcome Museum of Medical Science in 1914. Early in the history of Burroughs Wellcome & Co. the first step was taken in building up a world-wide distribution system by the establishment in 1886 of an associated house in Australia.

Between 1902 and 1910 there took place a period of overseas expansion, branches being opened at Cape Town, Montreal, Shanghai and Buenos Aires. It was during that period that the New York house was set up—in the first instance at 45 Lafayette Street. The New York house was incorporated as Burroughs Wellcome & Co. (U.S.A.) Inc. (a subsidiary of The Wellcome Foundation, Ltd.) in 1924. In 1924, the administration of Burroughs Wellcome & Co. and the many scientific establishments founded by Sir Henry Wellcome was unified by the registration of The Wellcome Foundation, Ltd., as a private limited liability company. After Sir Henry's death in 1936, his will revealed that all surplus revenues of The Wellcome Foundation, Ltd., were to be devoted to the advancement of research work in medicine and allied subjects. In 1925, chemical works and research laboratories were established at Tuckahoe, New York, and by 1930 the first of many research papers from them had appeared in the Press. Of the contributions to medicine by the New York house, globin insulin and Perazil (Histantin in the United Kingdom) are perhaps the most important. Globin insulin controls blood sugar in a manner more nearly approaching the nor-

Aerial view of general offices, production unit, and
The Wellcome Research Laboratories, Tuckahoe, New York.



mal than any other type of insulin in common use. Histantin is the brand name of a new antihistamine, chemically unrelated to other drugs of the class; it is notable for its prolonged action and relative freedom from side effects. A recent development of the New York laboratories has been Vasoxyl brand methoxamine hydrochloride injection, a new pressor agent for restoring blood-pressure in surgery.

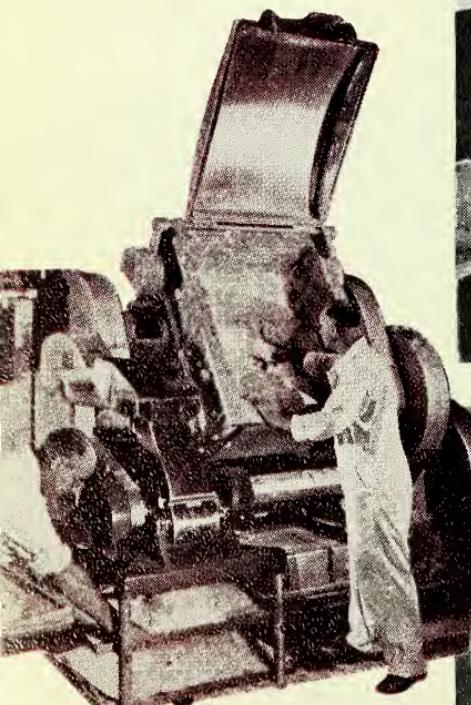
Most of the B. W. & Co. products in the U.S.A. and Canada are also available in other parts of the world. Thus an American customer buying one of the many noted B. W. & Co. branded specialities such as Kepler or Empirin, will receive a product identical with that obtainable in Europe, Asia, Africa or Australasia. A few, such as Timofax brand undecylenate ointment issued in New York for the treatment of fungous infections, and marketed in the U.K. as Tineafax brand compound undecylenate ointment, are adapted

in title or formula to meet the requirements of the territory in which they are sold. The special needs of each territory are, of course, studied. Thus certain products marketed in New York do not appear in the London price list. Examples are to be found in Nutragest brand dietary compound, Dexin brand high-dextrin carbohydrates for milk-modification, and Avima brand vitamins in syrup. Similarly, London issues a number of specialities unobtainable in New York.

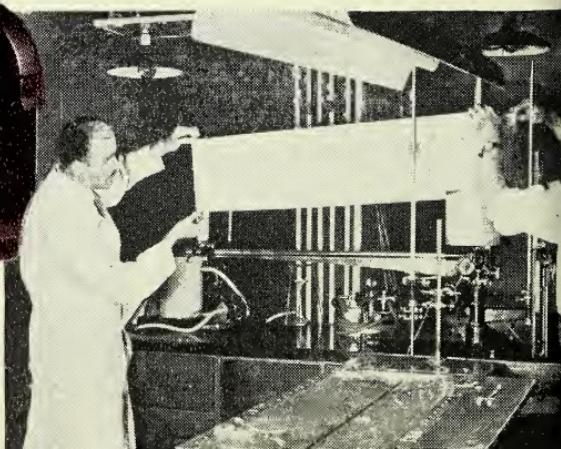
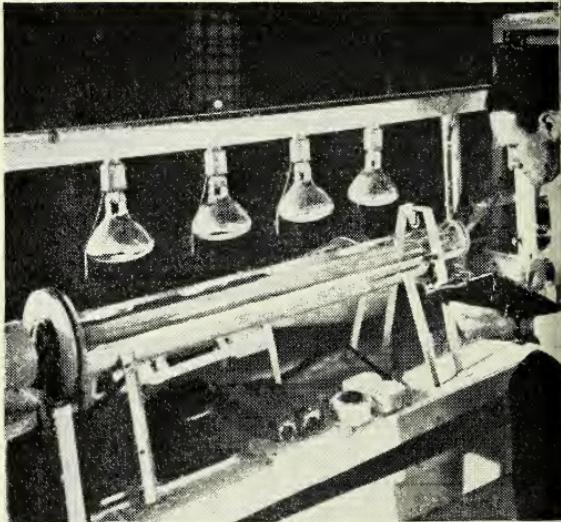
The constant exchange of ideas between the various units of The Wellcome Foundation, Ltd., in all parts of the world enables research, production and marketing to be carried out with maximum efficiency.

It is noteworthy that, as The Wellcome Foundation, Ltd., is a British concern, its profits help this country in its bid to obtain dollars.

Right: Pharmaceutical development laboratories, Tuckahoe, N.Y. An experimental run on a rotary drier with infra-red light.



Wet granulators in the Tabloid brand compressed products department, Tuckahoe, N.Y.



A corner of the pharmacological laboratories, Tuckahoe, N.Y.

ALKAMETHONIUM COMPOUNDS

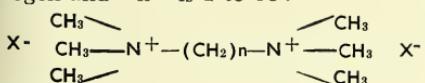
By J. HARPER, M.B., D.T.M.H. (Medical Trials Unit, May & Baker, Ltd.)

THE recently introduced series of bis-trimethylammonium alkane halides exhibits, in the wide range of pharmacological activity shown by its various members, two properties, interruption of neuro-muscular transmission and paralysis of autonomic ganglia, with wide clinical applications. The use of neuromuscular blocking agents as muscle relaxants in anaesthesia, in the electro-convulsive treatment of certain mental conditions, and in some spastic conditions of nervous origin, is now an accepted procedure in modern therapy, and it seems probable that autonomic blockade by surgery in hypertension, peptic ulceration and peripheral vascular disease may be partially if not wholly replaced by the use of drugs which produce similar effects.

Structure and Activity

Members of this homologous series consist of two trimethylammonium groupings linked together by a polymethylene chain of varying length. They have been designated by the number of carbon atoms in the chain, and it would seem that pharmacological activity depends on its length. The decamethylene member (C_{10}) is the most effective in blocking neuromuscular transmission, while ganglion-blocking activity is greatest in the penta- and hexamethylene members (C_5 and C_6).

They may be represented by the following structural formula where "X" is a halogen and "n" is 2 to 18:



Recently the Pharmacopœia Commission approved the following common or generic names for certain of these compounds, viz.:—

C_{10} (where $n=10$): decamethonium.

C_6 (where $n=6$): hexamethonium.

C_5 (where $n=5$): pentamethonium.

Alkamethonium compounds used clinically have usually been prepared as the diiodide or dibromide. The chief clinical applications so far have been either as muscle relaxants or autonomic blocking agents.

Bennett was the first (1940) to introduce extracts of curare for routine use as muscle relaxants; he used aqueous and alcoholic extracts of crude curare to reduce

the risk of injury in the convulsive-shock therapy of mental diseases. It was not until two years later that Griffith and Jones (1942) employed similar extracts to obtain muscular relaxation during surgical procedures and initiated a principle of anaesthesia that stands out as one of its great advances, and whose advent marked the beginning of the end for "rag and bottle" methods. That, however, was only a beginning, for extracts of curare were unreliable, and the crude substance came only from South America, a source made difficult to those in the Old World by the uncertainties of war and finance. The search for synthetic substitutes for curare was on.

Cationic Groupings

Barlow and Ing (1948) first prepared the simple bis-trimethylammonium compounds and examined them for curare-like activity. That course had been suggested to them by the fact that King (1935, 1936) had isolated tubocurarine and had shown it to be a quinoline alkaloid containing two quaternary nitrogen atoms, and they had theorised that its extraordinary potency in causing muscle paralysis might be due to two such cationic groups at some optimal distance apart. Subsequent pharmacological examination confirmed their inspired speculation and showed that decamethonium iodide was three times as potent a muscle paralysing agent as tubocurarine itself. At the same time, and working independently on the same series, Paton and Zaimis were examining the octamethylene compound for its histamine-liberating activity, when they too noticed this curare-like action; further investigation (1948a) of decamethonium iodide showed that it was even more active, and that the general paralysis of voluntary muscle which it produced in cat and monkey seemed to "spare" the respiratory muscles. The observation immediately suggested that the compound might on that account be safer than tubocurarine for clinical use in man. There was one great drawback: neostigmine did not reverse the paralysing action of decamethonium on voluntary muscle as it did that of the natural tubocurarine and the synthetic muscle-relaxant Flaxedil. In other words, its action was not under effective control.

Before decamethonium could be used clinically, an antidote had to be found, and strangely enough it was found in two compounds of the same series—hexa- and pentamethonium. In man the mutual antagonism was less apparent than in animals—there is great species variation in the actions of methonium compounds—and it was in no way comparable to that between neostigmine and tubocurarine or Flaxedil. In addition, the hexa- and pentamethonium compounds had other powerful and potentially dangerous actions, the most important of which was the production of a fall in blood pressure in hypertensive and anaesthetised subjects. The clinical applications of this action are dealt with later, but it may be mentioned here that the fall in blood pressure, with its consequent reduction in bleeding, has been utilised to ensure a bloodless operating field in such procedures as sympathectomy, prostatectomy and radical mastectomy (Armstrong Davison 1950).

Wide Trial Despite Risk

The fact that the antagonism of penta- and hexamethonium salts to the muscle-paralysing action of decamethonium iodide was only partial, and that it could be attended by severe side-effects, has not prevented fairly wide trial of decamethonium iodide as an aid to procuring muscular relaxation under light surgical anaesthesia. In the majority of cases the body disposes of decamethonium salts fairly rapidly by excretion or detoxication, and any respiratory embarrassment or apnoea that occurs can be dealt with by a short period of controlled or artificial respiration, which can be easily performed by manual compression of the rebreathing bag of the apparatus used for administering the general anaesthetic. In some cases, and particularly if two doses are used, the recovery period may be prolonged, either from a cumulative effect of the two doses or because the first dose may have sensitised the patient to the second.

Years of experience must accumulate before the final place of muscle relaxing agents such as decamethonium iodide, tubocurarine and Flaxedil as adjuncts to anaesthesia is determined. Two things, however, are certain: they must be reserved for those with specialised training in the technique and with adequate facilities for resuscitation at hand; and the degree of relaxation obtained with them must not be allowed to lull the anaesthetist into

using too light general anaesthesia in patients who cannot move but are still conscious and can still feel pain.

Use as Ganglion-blocking Agents

Soon after Acheson and Moe (1945 1946) had demonstrated that a quaternary ammonium cation — tetraethylammonium — was capable of blocking transmission of nerve impulses through both sympathetic and parasympathetic ganglia in animals Lyons and others (1947) studied its effect in normal and abnormal subjects and made preliminary observations on the possible clinical applications of such a method of therapy. These were later substantiated in part by Boyd and his colleagues (1948). The therapeutic value of such an action in the symptomatic relief of a wide range of conditions including hypertension, peripheral vascular disease, gastric hyperacidity and gastro-intestinal spasm, was apparent, but the effects of tetraethylammonium salts, which were produced only by parenteral administration, were too short-lived and variable to be of any great clinical value, and unpleasant side-effect were common.

When it was realised that certain alkylmethonium compounds (especially the penta and hexa ones) had a more intense and more persistent ganglion-blocking action, it was inevitable that tentative trial would be made using them in condition where TEAB had been suggested (Arnold *et al.* 1949, Burt and Graham 1950), and that investigations into their activity on oral administration would be instituted (Kay and Smith, 1950). The exact indications for those two recently introduced medicaments in therapeutics have yet to be determined, and clinical trials and investigations to that end are still in progress.

Studies made so far with pentamethonium salts, utilising primarily their sympatholytic action, indicate and would appear to justify clinical use in investigating and selecting cases of hypertension for sympathectomy, in the treatment of such cases as have relapsed following sympathectomy or in which the results of sympathectomy have been disappointing, and in the prevention and treatment of hypertensive symptoms and episodes such as sleeplessness, headache, failing vision, fits and cardiac failure. Peripheral vascular disorders constitute a much smaller field; alkamethonium compounds increase blood-flow mainly in the lower limbs, and cause little change in the upper ones, and

the results of sympathectomy are good, so that their main indication would seem to be adjuvant therapy for lower-limb sympathectomy cases.

Effect on Gastric Function

Kay and Smith (1950), have investigated, by modern methods, the effect of the vagolytic activity of hexamethonium bromide on gastric function in ten cases of duodenal ulceration. The principles underlying the treatment of peptic ulcer—reduction of the acidity of gastric juice and relief of spasm—have been attempted previously by atropine, vagotomy, and tetraethylammonium bromide, but none of those methods is completely satisfactory. It was hoped that trial would show hexamethonium bromide to be free from those disadvantages and to be at least equally, if not more, effective. Their results show that the daytime spontaneous secretion of hydrochloric acid was inhibited to the point of achlorhydria, that the volume and acidity of the twelve-hour spontaneous night secretion was reduced, and that there was prolonged inhibition of gastric motor activity. Further work is being done in applying those findings to the management of cases of gastric and duodenal ulceration.

Hypertension and peptic ulceration are both common complaints, bringing discomfort and danger to the sufferers as well as reducing their capacity for work. Should the early promise of relief from those diseases by use of methonium compounds be sustained by further experience, it must always be remembered that it is only relief and not cure, and that it is obtained by means of drugs unknown ten years ago and with potentialities still little understood. The search for the causes of those illnesses, and attempts to remove them, must go on.

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A PHARMACIST'S ANTHOLOGY

THE minor ailments of the community were, as has been said before, attended to by the Apothecary. Should you need her services, you knocked at the door of the dark little stone-floored chamber where she plied her trade. Within, the white-washed walls were hung with rows of pots, pans and tiny long-handled pipkins of polished copper and brass. An immense, sinister-looking cupboard contained remedies for every emergency: bottles of elder-syrup for coughs in the winter; orange-flower water for insomnia; large, round, gelatinous pills, containing black, fishy-smelling liquid to be taken as a "help" to fasting during the forty days of Lent; bark—another unpopular but efficacious remedy for weakness; "tilly-tea"—brewed from flowers of the *tilleul* or lime-tree—sovereign cure for colds . . . and more modern remedies, tubes, boxes, bottles, packets of them; and a small, ancient bookshelf containing endless little old wives' recipes.—From "I Leap Over the Wall," by Monica Baldwin.

Chemotherapy in Tropical Diseases

A review of some of the latest developments in prevention and treatment of diseases endemic in tropical countries.

SINCE the beginning of the present century, when the relationship between malaria and mosquitoes had become known, knowledge of tropical diseases has been steadily amassing. The expansion of entomology and parasitology coupled with the development of laboratory and field investigation has brought to light many obscure facts about tropical diseases whose origin and mode of transmission were previously unknown. Parasites, hitherto unrecognised, have been identified and the part played by intermediate hosts in transmitting disease to man elucidated. With these advances can be correlated the rapid strides of chemotherapy in modern times.

Some of the more important tropical diseases are discussed below under the headings of origin, mode of transmission and the chemotherapeutic agents used in their control.

Malaria

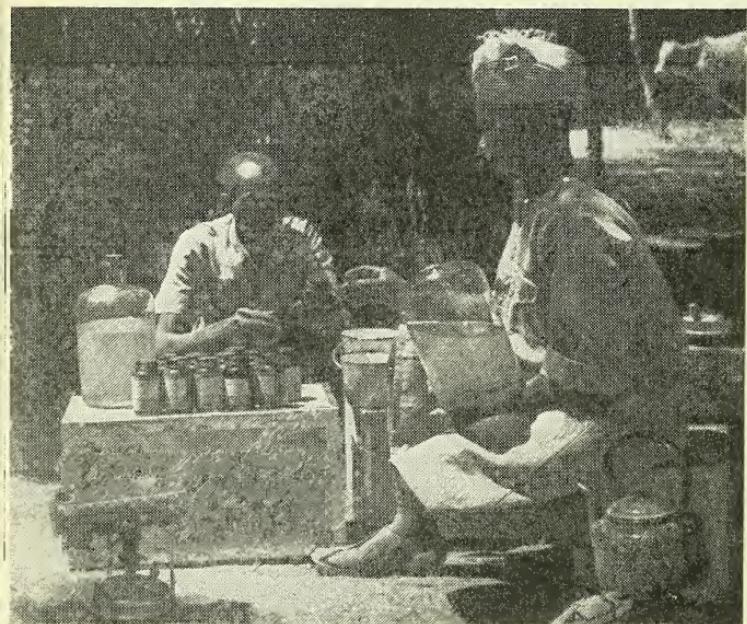
Malaria, one of the most important of tropical diseases and among the greatest

scourges of mankind, is a protozoal disease caused by different species of *Plasmodium*. The well-known forms are caused by *P. falciparum* (the cause of malignant tertian), *P. vivax* (benign tertian) and *P. malariae* (quartan malaria). The diseases are spread by the female anopheline mosquito and the organisms introduced into man in the form known as sporozoites.

New Forms Found

The parasite's asexual life cycle (in which it multiplies within the red blood cells until malarial symptoms are produced) and the course of the sexual forms or gametocytes (which complete their cycle in the body of the mosquito) have long been known. Workers at the London School of Tropical Medicine and Hygiene demonstrated recently a third stage of development known as the pre-erythrocytic cycle which occurs between the introduction of the parasite into the body and its appearance in the red blood cells. In *P. vivax* this stage may persist for months and be reinforced by parasites passing back from the red blood cells to the liver. In *P. falciparum* it probably exists for only a very short period. The malarial parasite can therefore hide itself in the liver and multiply in the hepatic cells, build-up a reservoir of infection which can cause relapses. That behaviour goes far to explain the differing effects produced by various antimalarial drugs.

Considerable progress in reducing the incidence of malaria has resulted from measures designed to destroy mosquitoes and their breeding grounds. Modern



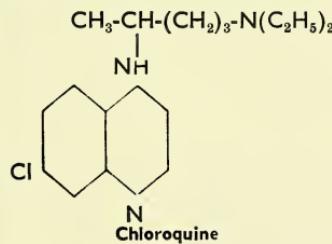
Preparing in the field injections of a trypanocide for veterinary use.

insecticides such as Gammexane and D.D.T. are effective against larva and adult mosquitoes and mass destruction is carried out by large-scale spraying.

In the treatment of acute attacks quinine is still widely used and is especially effective as a schizonticide. In recent years, however, new synthetic drugs have been introduced. They may be divided into the following groups:—

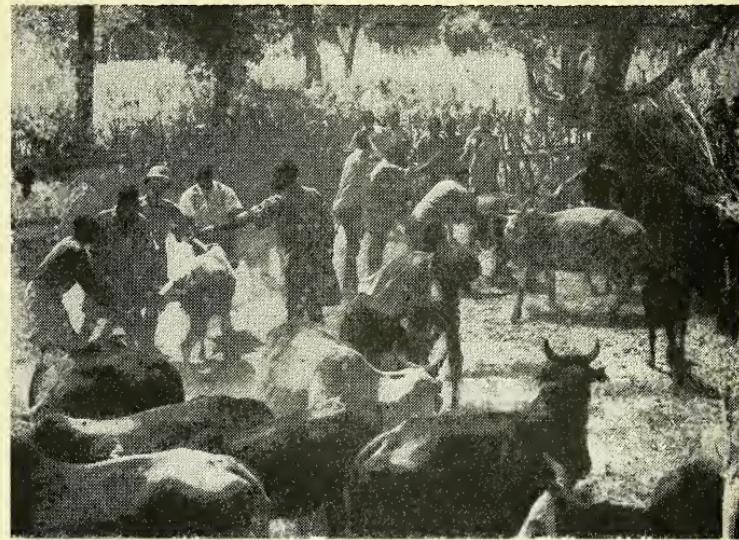
(1) Acridine compounds: for example mepacrine; (2) 4-aminoquinolines: for example chloroquine, sontoquin; (3) Biguanides: for example Paludrine (proguanil); (4) 8-aminoquinolines: pamaquin, pentaquin, isopentaquin.

Like quinine, mepacrine has a marked schizonticidal action against the asexual forms of all species of malaria. It is also an effective suppressant; its continued use over long periods produces a yellow coloration of the skin.



Trials with chloroquine indicate that it is very effective in terminating clinical attacks. It is also used as a suppressive in a single dose once weekly and is considered to be less toxic than mepacrine.

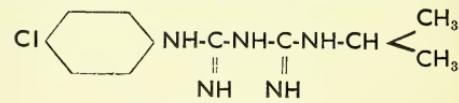
Least toxic of the antimalarials, Proguanil acts on the pre-erythrocytic forms of *P. falciparum* as well as on the schizonts and gametocytes of all species. It is therefore a true causal prophylactic of *P. falciparum* malaria and a suppressant of *P. vivax* infections; it controls the symptoms of all forms of malaria and produces radical cures of malignant tertian malaria.



Cattle rounded-up in a compound receiving experimental injections of a trypanocide.

Its effect on gametocytes is to render them non-infective to mosquitoes.

Pamaquin was the first synthetic antimalarial. Its chief function is to reduce the high relapse rate which occurs in benign tertian and quartan infections with any other form of treatment. This it does by acting on the reservoir of infection which lies in the epithelial cells of the liver. It is often given with quinine or

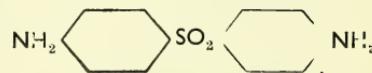


Paludrine (proguanil)

Proguanil, Pentaquin and isopentaquin are closely related compounds possessing a similar action.

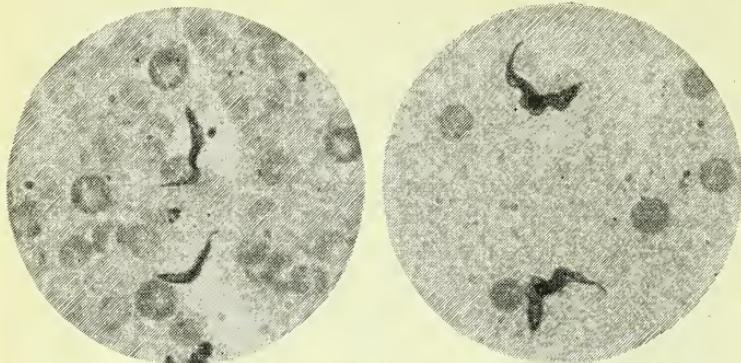
Leprosy

The most significant advance in the treatment of leprosy has been the use of the sulphones. The simplest is diaminodiphenylsulphone from which are derived



4:4' diaminodiphenylsulphone

the complex sulphones such as Sulphethrone, Diasone and Promin. They were originally regarded as less toxic than the parent substance, but recent evidence has shown that they depend for their activity on being broken down in the body to the



Left, *Trypanosoma congoense*, and right, *Trypanosoma brucei*, $\times 1050$.

parent sulphone. That, in equivalent dosage, has proved to be no more toxic than the more complex derivatives and has, in fact, been used with success in leprosy. Given orally it is well absorbed and slowly excreted, so that only small doses are needed.

Kala-azar

The causative organisms of kala-azar are protozoal parasites (*Leishmania donovani*) which are found embedded in the endothelial cells of the blood vessels and lymphatics, spleen and bone marrow. The parasite completes its cycle of development in a species of sandfly which transmits the disease by its bite. Local control can be effected by residual sprays of insecticides. Potassium antimonytartrate by intravenous injection was first used in treatment, but better results have been obtained with the pentavalent antimonial compounds such as Neostibosan and sodium stibogluconate. In antimony-resistant cases the diamidines, e.g., pentamidine isethionate, have proved effective.

Trypanosomiasis

In humans, sleeping sickness is a chronic disease of tropical Africa caused by protozoal parasites, *Trypanosoma gambiense* and *T. rhodesiense*, which are transmitted by tsetse flies (*Glossina* species). In the early stages there is irregular chronic fever and lymphadenitis. Later the central nervous system becomes involved and after a long course the disease, unless efficiently treated, usually terminates in death. Suramin is one of the most effective drugs for use in the early stages of the disease and it has also given good results as a prophylactic. For advanced cases, however, in which the trypanosomes have

reached the nervous system, tryparsamide is of established value. Pentamine is also used extensively in treatment and prophylaxis.

In animals, different species of trypanosomes also infect animals. The disease is thus a problem of great economic importance and considerable research has been carried out to

compounds for its effective control. The antimonials were first used, then the diamidines (pentamidine), suramin and dimidium bromide. The most satisfactory drug to date is Antrycide (4-amino-6 (2'-amino-6'-methyl pyrimidyl-4'-amino) quinaldine) introduced at the end of 1948.

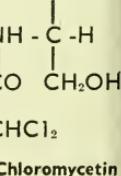
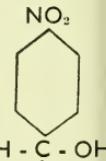
Its toxic effects are minimal, and treatment is carried out with a single subcutaneous injection. All the common species of trypanosomes which infect domestic animals are embraced in its action. The methyl sulphate is used for treatment, and the Pro-salt, a mixture of methylsulphate and chloride, is used for prophylaxis. It is under test in Africa where there are vast tsetse-infected areas in which it, on account of the prevalence of trypanosomiasis, is impossible to keep farm animals.

Scrub Typhus

Scrub typhus, the most important of the rickettsial fevers found in tropical countries, is spread by the larvae of the mite *Trombicula deliensis*. Effective prophylaxis can be achieved by the use of repellants such as dibutylphthalate, but recent work has shown that the antibiotics Chloromycetin and aureomycin are specific against the disease and can effect rapid cures.

Schistosomiasis

This name designates a group of diseases caused by the presence of trematode worms (flukes) in the abdominal veins; the ova of these worms damage the



genito-urinary and intestinal mucous membranes and the liver. The intricate life cycle of the causative fluke and the part played by fresh-water snails as intermediate hosts have now been established. Various methods have been devised to eradicate these aquatic snails which act as a reservoir of infection, but the problem is difficult because of the extensive operations required. Trivalent antimonial preparations, e.g., potassium antimonytartrate and stibophen, have been widely used therapeutically with some success. Recently, promising results have been obtained from the use of a new synthetic drug known as Nilodin (a methylthioxanthone compound). It may be given by the mouth instead of by injection so that mass treatment can be conveniently conducted in village communities. A cure rate of 90 per cent. has been obtained in cases of urinary schistosomiasis.

Bacillary Dysentery

Bacillary dysentery is an acute epidemic disease caused by the invasion of the larger intestine by *Bacillus dysenteriae* (Shiga, Schmitz, Flexner and Sonne types). Sulphonamides are effective against these organisms and those which are poorly absorbed from the intestine are usually employed. War-time experience in the Middle East established the value of sulphaguanidine, and good results have also been obtained with phthalylsulphathiazole.

Amoebic Dysentery

Amoebic dysentery has a gradual onset, and the infection may be present for some time before it is discovered. The causative agent is the *Entamoeba histolytica*, an amoebic organism found in the faeces during the acute stage. This acts chiefly on the submucous coat of the intestine, producing ulceration, which is liable to be followed by amoebic hepatitis and liver abscess. Flies and contaminated water are the main agents in the transfer of

the disease and the infection is liable to spread wherever sanitation and hygiene are poor. Prophylaxis is effected by protecting food-stuffs and avoiding contamination of water and vegetables. For treatment, emetine is widely used as the hydrochloride parenterally and as the bismuth iodide by the mouth. Other drugs which have proved of value are the iodo-quinoline compounds, such as chinoifon, diodoquin and Vioform; and arsenicals such as carbarsone and more recently the thioarsenites. Combinations of these drugs are frequently used. In secondary infection of the damaged bowel wall penicillin or succinylsulphathiazole is of value.

Filariasis

Filariasis covers a group of diseases caused by the invasion of the body by certain nematodes, the chief of which is *Wuchereria bancrofti*. This worm has a mosquito as its intermediate host and is a frequent cause of elephantiasis and conditions associated with lymphatic obstruction. In treatment, potassium antimonytartrate and other organic antimonial compounds have been used but the results achieved by them are often unsatisfactory. Injections of stibamine glucoside, however, can destroy the adult filarial worm of cotton rats. The most recent advance in the treatment of filariasis has been the use of diethylcarbamazine (Hetzaran or Banocide). This is a derivative of piperazine, which is given by mouth and is markedly active against *Wuchereria bancrofti*. The administration of this drug for short periods is so effective as to suggest the possibility of breaking the filarial cycle at the link between man and mosquito, for man is the only known host.



Illustrations showing the effect of sulphone treatment on a lepromatous girl. The left-hand picture shows her before, and the right after, treatment.

Modern Veterinary Therapy

By N. McG. Black, M.R.C.V.S.

VETERINARY ADVISER, BOOTS PURE DRUG CO., LTD.

MOST pharmacists in country towns and rural areas have a long tradition of service to the farmer. The part they now play in the distribution of modern remedies for the control of diseases and ailments of livestock is of greater value to the country than ever before. Preventive medicine brings improved animal health, and in its train more meat, milk, eggs and other foods. These in turn raise the standards of human nutrition and increase human resistance to disease. Many drugs now used in large quantities in modern veterinary treatment need to be distributed under skilled supervision, which the pharmacist is particularly fitted to exercise. The following notes may prove helpful.

Mastitis Treatment

In the dairy herd, mastitis is a big problem—all the more serious because of the interference it causes in the nation's milk supply. No less than four types of mastitis are recognised, each demanding its particular treatment. The advent of the sulphonamides led to a great improvement in the treatment of the predominant type—that caused by *Streptococcus agalactiae*. Sulphanilamide by mouth is certainly of value, but as a long-term measure it may be considered ineffective, since it does not provide complete sterilisation of the affected quarters of the diseased udder. Sulphanilamide in a mineral oil for injection directly into the affected quarters has been used, either alone or in conjunction with sulphamerazine by mouth, but the treatment has been superseded by more effective measures. Penicillin is a highly curative agent. From its use a high standard of bacteriological sterilisation of the udder may be expected, with consequent greater control over the spread of infection. Much work has been done towards evolving a salt of penicillin that will prolong the effect in the udder, but so far the ideal has not been achieved. In human medicine the procaine salt of penicillin provides continuous high levels when injected intramuscularly, but the same salt has very different conditions in which to work when in the udder, and the results have been less good. Excretion trials have shown that procaine penicillin has no real advantage over the calcium salt. To those pharma-

cists who are perhaps more acquainted with medical than with veterinary treatments it may be pointed out that administration of penicillin by the parenteral route does not result in an appreciable concentration in the milk, and thus is of no value. Diamino-diphenyl-sulphone is a highly effective agent, but it is better suited to the treatment of non-lactating animals. The lay Press has recently given much prominence to the development of a new antibiotic, Nisin, which is claimed to be a highly effective agent.

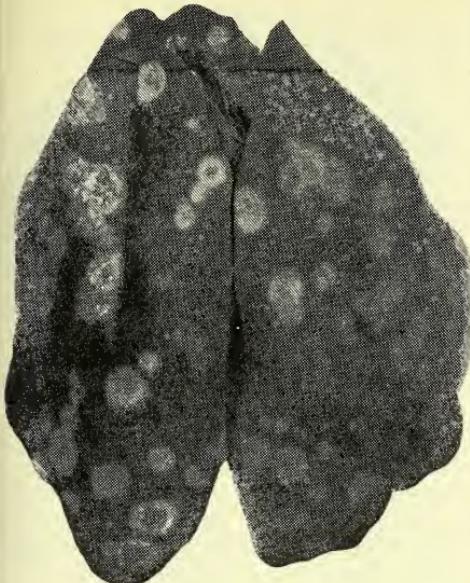
Sulphonamides in Coccidiosis

Coccidiosis, a disease of many animals and birds, is caused by a protozoan parasite. The disease is of primary importance in poultry, the acute (or caecal) form attacking young chickens, and the chronic (or intestinal) type affecting older birds. In chickens the disease is second only to bacillary white diarrhoea (B.W.D.) as a cause of loss, the mortality reaching as high as 90 per cent. in untreated outbreaks. Here again the sulphonamides provide a high measure of control, those used being sulphaguanidine, sulphathiazole and Sulphamezathine. Of these the last-named is undoubtedly the most effective. It may be given as powder in the mash or as a soluble solution for addition to the drinking water, thus providing an easily administered mass-dosage treatment. Recently mepacrine, which has been used for coccidiosis in larger animals, was suggested for use in chickens, but clinical trials using Sulphamezathine as a standard for comparison did no more than reaffirm the extreme value of the latter product. Attention has, of course, been directed to possible means of prevention, and recent American work suggests that sulphaquinoxaline provides a measure of protection.

Blackhead in Turkey

Blackhead (or entero-hepatitis) is another disease caused by a protozoan parasite that affects birds—chiefly turkeys—and much work is being done to learn more about the disease.

Arsenicals by mouth and by injection have been in use for treatment purposes for a number of years, and have met with varying success. For treatment to be successful, it must be instituted at the first

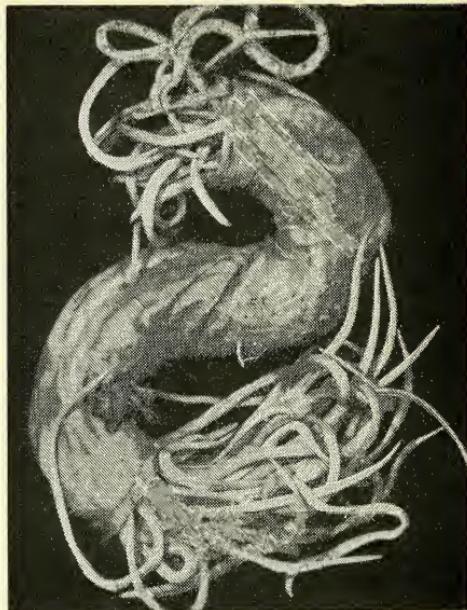


Liver of turkey suffering from blackhead.

sign of the disease. Recent research work in this country has demonstrated a highly reliable method of artificial infection, and that should result in a more accurate evaluation of existing treatments and aid in the search for a preventive agent.

Chemical Caponisation

Chemical caponisation of cockerels to produce a heavier bird has been introduced to the poultry world within the past few years. The method involves the implantation of synthetic oestrogen as tablets under the skin of the neck. The absorbed oestrogen suppresses the secondary sex characteristics of the male bird, which becomes female in appearance during the period of treatment. Treated birds, besides showing greater increase in weight, neither crow nor fight. The carcass becomes plumper and the skin of better appearance. The bird is easier to cook, and more succulent to eat, because of the increased fat deposits between the muscles. Possible effects on the consumer have been closely studied, and provided the tablet is implanted just behind the head, so that the part has every chance of being discarded during preparation for table, it seems certain that the minute traces of oestrogen in the rest of the carcass have no ill effects on the consumer. Since hormone products are potentially dangerous in the wrong



A remarkable (probably unique) illustration showing acute blockage of the small intestine of pigs from roundworm infestation.

hands, the distribution of at least one brand of implantation tablet is controlled through veterinary surgeons or on prescription, but the restriction should offer no barrier to economic use of the method.

Mass-dosage Treatment

Mass dosage in the treatment of animals has many advantages—not least the avoidance of hand dosing of intractable animals. None can be more intractable than the pig when attempts are made to administer fluid medicines, and it is of interest to note, therefore, that the most up-to-date method of worming the pig is by the use of sodium fluoride in the dry feed. One fact requires attention from the pharmacist, who normally need do no more than ensure that the dose of a medicine is accurate. Having computed the dose on an age and weight basis, he must give directions that the concentration of sodium fluoride, when mixed in the dry feed, must not exceed 1 per cent. Otherwise, some pigs may get an overdose of the drug.

Control of Parasites

The control of the various external parasites affecting sheep by the use of dip has been greatly improved by the introduction of parasiticides of the DDT and Gammexane type. This type of dip has



Left: Head of normal cockerel. Right: Caponised cockerel showing comb and wattle are completely in appearance.

been proved of such high technical quality that the Ministry of Agriculture now allows only one dipping for the control of sheep scab instead of the double dipping required with the older types of dips.

For eradicating the roundworms that infest cattle, horses and sheep, phenothiazine remains, when compounded with suspending and wetting agents, the drug of choice.

In the sphere of milk production, the chemist has provided the dairy farmer with a number of products essential for clean milk production, the thorough cleansing and disinfection of dairy utensils, and the prevention of loss due to bacterial souring. Certain hypochlorite solutions are "approved" for the satisfactory disinfection of milking machines, the preparation of the churns used for milk storage, and the sterilisation of cloths used for udder washing. A change in legal requirements for diary sterilisation, giving the farmer the option of the chemical method in place of heat sterilisation by the use of steam, has been a direct tribute to the efficacy of the hypochlorite, and a recognition of the totally inadequate water supplies in some rural areas.

The quaternary ammonium compounds have distinct possibilities as disinfectants for dairy use.

It has recently been demonstrated that the bacteriological evaluation of these products by the phenol coefficient method (Rideal-Walker test) as applied to the usual disinfectants, is unsatisfactory, since minute residual traces of quaternary compounds can totally inhibit the growth of test bacteria, but new techniques now being em-

ployed provide a clearer indication of the value of these compounds.

Streptomycin is the newest antibiotic to be used in veterinary practice in this country. So far, there have been no reports in the British professional Press of research work conducted on the possible use of streptomycin, but it would appear that organisms over a wide range are likely to be susceptible. Since drug resistance to streptomycin in the human subject has been clearly demonstrated, some observers have expressed the opinion that it should be used only in tuberculosis-free herds. It is possible that its indiscriminate use in the treatment of some other pathological condition in the bovine, which may at the same time be suffering from undetected tuberculosis (with the excretion of the organisms in the milk), could lead—with disastrous results—to infection of susceptible human subjects with a streptomycin-resistant strain of organisms.

Work on Veterinary Codex

It is highly satisfactory that the Pharmaceutical Society, National Veterinary Medical Association and Royal College of Veterinary Surgeons have decided to co-operate in the issue of a British Veterinary Codex, and that work has already begun on production. A satisfactory standardisation of veterinary drugs and galenicals has long been required. Discussions are still continuing between the Pharmaceutical Society, the veterinary authorities, and other interested bodies in an attempt to evolve a method of controlling the distribution of certain veterinary products through "ethical" channels.

Recent Developments in Perfume Materials

By H. J. STRAUSZ, D.ph., M.A., F.R.I.C.

THE manufacture of perfumed cosmetics and toilet preparations, soaps, disinfectants and deodorants during the past fifty years has reached enormous dimensions. In recent years perfumery chemists have developed many new perfumery materials and have modified a great number of others. They have enriched our knowledge of the constituents of essential oils and their properties, and have synthesised many products chemically identical with, or closely related to, certain natural isolates.

The following is a brief account of some recent developments in research and in the use of natural essential oils and other perfume materials, and of synthetic aromatics.

Citrus Oils

The high hydrocarbon (terpene and sesquiterpene) content of citrus oils, chief of which are cold-pressed oils from the peels of lemon, orange and bergamot fruits, is the cause of their poor solubility in dilute alcohol, the solvent vehicle in Colognes, other toilet waters, and flavouring essences. Furthermore, the hydrocarbons and the aldehydes in them are prone to resinify and to oxidise under the influence of air and light or under bad storage conditions, with partial or total deterioration of odour and flavour. Removal of the terpenes and sesquiterpenes by fractional distillation under reduced pressure (3 to 5 mm.) has led to the production of so-called terpeneless and sesquiterpeneless citrus oils which are much stronger in odour and flavour, more stable, and much more soluble in dilute alcohol. However, the aldehydes and some other oxygenated compounds in the citrus oils seem to decompose—at least partially—at the heat of distillation which, even at a pressure of only 1 mm., amounts to about 90-110° C., thus causing a deterioration of odour and flavour in the natural cold-pressed citrus oil. To prevent

it, considerable improvements in the manufacturing process have been achieved. For example, by extracting the terpeneless oils with dilute alcohol and another solvent and distilling-off the solvents under reduced pressure at much lower temperature. Fastidious perfumers, however, still prefer the natural cold-pressed citrus oils, and make use of a recent discovery by Kester-son and McDuff ("American Perfumer," 1949, 54, 285) that α -tocopherol is the most effective antioxidant in citrus oils (especially orange oil) during prolonged storage. α -Tocopherol is the fat-soluble vitamin E occurring naturally in wheat-germ oil. It has been synthesised by Professor Karrer and his co-workers in Zurich.

Cedarwood Oil

The aromatic woody odour of cedarwood oil, the low-priced steam-distilled oil (chiefly produced from the sawdust of *Juniperus virginiana L.* in the States of Virginia, North Carolina and Tennessee) is utilised mainly in soap perfumes of the oriental and fern types. Some derivatives of cedrol and cedrenol, the odour constituents of cedarwood oil, have recently been prepared. They are said to have a stronger and finer woody odour of great tenacity. It is noteworthy that, according to Stoll and Commarmont ("Helv. Chim. Acta," 1949, 32, 1836), β -bicyclo farnesol has an odour recalling that of cedarwood. Similarly, dihydro- α -ionone and dihydro- β -ionone possess an odour resembling that of cedarwood. (Guenther, "The Essential Oils," Vol. II, p. 465.)

According to Klein ("American Perfumer," 1948, 51, 137, 242) the cedarwood oil produced from a new source, *Juniperus mexicana*, in Texas and Mexico (average yield 2 per cent.), possesses an odour of unusual strength, finer and more persistent than that from *J. virginiana*. In recent years an East African cedarwood oil (from the sawdust of *J. procera*) of good quality has been introduced in substantial quantities at a remarkably cheap price.

Peppermint Oil

The enormous consumption of peppermint oil in the production of dental creams, confectionery, chewing gum and pharmaceutical preparations has inspired further research into its chemical composi-



Dr. H. J. Strausz

tion. Schmidt (Berichte, 1947, **80**, 538) gave evidence of the presence of jasmone (less than 0.1 per cent.) in oils distilled from *Mentha piperita*. The author claims that jasmone has a noticeable effect on the fine odour and flavour of the oil. Schmidt found also, in the last runnings (high-boiling fractions) from American, Russian, Italian and Bulgarian oils, hitherto unknown constituents such as *d*-menthofuran (derived chiefly from the flowers and a characteristic constituent of American oil), *l*-caryophyllene, another bicyclic sesquiterpene $C_{15}H_{21}$, thymol, carvacrol, and octenoic acid (free and esterified), and other minor constituents. Though most of these bodies are present only in traces, they play an important part in the quality of flavour in all peppermint oils. It may be worthy of mention that the presence of *d*-neomenthol (b.p. $212^{\circ}/760$ mm.) in Japanese "peppermint" oil (from *M. arvensis*) is partly responsible for the unpleasant "bitterish-earthly" by-flavour of that oil.

Farnesol and Nerolidol

Farnesol is a sesquiterpene alcohol of faint flowery odour, occurring in small proportions in the more valuable blossom oils, such as jasmine, syringa, lily-of-the-valley, and reseda. Its presence in these oils, and in any flowery perfume composition, even in traces, develops in them a particularly sweet and delicate blossom odour. It has been synthesised by Ruzicka and co-workers ("Helv. Chim. Acta," 1923, **6**, 497) from nerolidol, another sesquiterpene alcohol occurring naturally in balsam of Peru (2 per cent.) and orange blossom oil. The rather costly synthesis resulted in a prohibitive price of farnesol, and its use was confined to the most expensive luxury perfume compositions. It was not until 1947 that Naves ("Helv. Chim. Acta," 1947, **30**, 275, 278; 1948, **31**, 44, 408) found in cabreua oil, derived from Brazilian trees of *Myrocarpus fastigiatus* and *M. frondosus*, 60 to 80 per cent. of nerolidol and 2.5 per cent. of farnesol, as well as in the oil distilled from an acetone extract of the wood of *Myroxylon pereirae* (the source of Peru balsam), 65 per cent. nerolidol. Similarly Penfold, Morrison and McKern ("Perfumery and Essential Oil Record," 1948, **39**, 141) found in the volatile oil of the Australian tree *Melaleuca virida*, 70 per cent. of nerolidol and 30 per cent. of linalol. A well-known Swiss firm produces now both farnesol and nerolidol

derived from these rich natural sources on a commercial scale and the use of these most valuable perfume materials is now possible in less expensive floral perfume compositions. It is claimed that nerolidol rounds out a composition and aids the fixation of a perfume especially when blended with hydroxycitronellal.

Ambergris

The peculiarly fine "velvety" and long-lasting odour of some luxury perfumes is due to their content of well-matured alcoholic extract of true ambergris. Until recently little was known of the constituents of ambergris apart from ambrein, a colourless and odourless substance (m.p. 83° C.) first isolated from ambergris by Pelletier and Caventou in 1820. Considerable research work in the past twenty years has revealed that ambergris contains, besides 25-45 per cent. ambrein, 10-16 per cent. other insoluble matter, 2-4 per cent. of the hydrocarbon pristane ($C_{18}H_{38}$), 30-40 per cent. epicoprosterol, 1.5 per cent. coprosterol, 0.1 per cent. cholesterol, 6-8 per cent. ketones (chiefly coprostane-3-one), 5 per cent. free acids, 5-8 per cent. esterified acids and a small amount of porphyrins. It has been found that probably the greater part of the odorous products of ambergris are oxidation products of ambrein a tricyclic triterpene alcohol $C_{30}H_{52}O$, and that the persistent long-lasting odour of ambergris may be partly explained by a constant autoxidation of ambrein with the formation of volatile products, catalysed by the appreciable amount of copper contained in ambergris (Lederer, "Journal of the Chemical Society," August 1949, 2122-2125). The most important oxidation product of ambrein is dihydro- γ -ionone (b.p. $116-118^{\circ}/10$ mm.) which possesses the very fine and typical odour of ambergris and is one of the volatile constituents of ambergris (Ruzicka, Seidel and Pfeiffer, "Helv. Chim. Acta," 1948, **31**, p. 827). Dihydro- γ -ionone has been synthesised by Ruzicka, Buchi and Jeger ("Helv. Chim. Acta," 1948, **31**, 293). Whether synthetic dihydro- γ -ionone is being produced on a commercial scale and available for use in perfumery is not known.

Synthetic Irone

The concrete oil of orris root, containing some 90 per cent. of waxy and odourless myristic acid, has for centuries been used in the compounding of finest violet scents for handkerchief perfumes and cosmetics.

The main odorous constituent of the de-waxed (tenfold) volatile orris oil is a six-membered cyclic ketone ($C_{14}H_{22}O$), iron. Ten kilos of orris root yield about 2 gm. of iron. The high price of the liquid (tenfold) pure orris oil inspired a number of prominent scientists to investigate the chemical structure and finally to synthesise iron. The merit in the spectacular success of this important research work goes chiefly to Ruzicka and co-workers ("Helv. Chim. Acta," 1947-49, Vol. 30-32) and to Naves and co-workers ("Helv. Chim. Acta," 1947-49, Vol. 30-32). It has become evident from this most brilliant research work that natural iron contains about 75 per cent. of γ -iron (6-methyl- γ -ionone), about 25 per cent. of α -iron (6-methyl- α -ionone) and traces of β -iron. The violet odour of the α -isomer is finer than that of the γ -isomer while β -iron has an odour approaching that of β -ionone. Fortunately both research groups succeeded in synthesising α -iron, the ketone with the finest and most powerful odour of orris, and this most valuable perfume material will soon become commercially available at a price to permit its wider use.

Synthetic Jasmone and Civetone

The synthesis of the ketone known as jasmone (pentenyl-methyl-cyclopentenone) of which the jasmine flower oil contains about 3 per cent., was accomplished in 1935 by Treff and Werner ("Berichte," 1935, **68**, 640), using as starting material cis- β -hexenol isolated from the end fractions of Japanese mint oil. However, the yield was meagre (18 per cent.) and the price of the synthetic ketone too prohibitive for use in artificial jasmine oil. Hunsdiecker succeeded in increasing the jasmone yield of the original Treff-Werner method to about 80 per cent. as well as synthesising β -hexenol ("Berichte," 1942, **75**, 447, 455). It remains to be seen whether this development will lead to a commercial evaluation of the improved synthesis. Meanwhile, more easily obtainable ketones with jasmone-like odour have lately been developed. It is noteworthy in this connection that dihydrojasnone has proved to be the most satisfactory substitute for natural jasmone and fortunately is obtainable in good yields from readily accessible material (Frank and co-workers, "Journal of the American Chemical Society," 1944, **66**, 4).

The odorous principle of natural civet has recently been synthesised by Stoll,

Hulstkamp and Rouvé ("Helv. Chim. Acta," 1948, **31**, 543). They have shown that synthetic cis-civetone is identical with natural civetone ($C_{17}H_{30}O$). Natural civet, containing up to 3 per cent. of civetone, has been used for centuries as a most tenacious fixative in high-class perfumes. It is thought likely that synthetic civetone will be available soon.

Synthetic Muscone

Natural musk, the expensive fixative of exalting odour, used in a great number of luxury perfumes, contains about 1 per cent. of muscone, its odorous principle. The ketone ($C_{16}H_{30}O$) is chemically known as 3-methyl-cyclopentadecanone. The various syntheses of *dl*-muscone by Ziegler and Weber, Ruzicka and Stoll and Hunsdiecker have proved to be expensive and not economical. Stoll and Rouvé ("Helv. Chim. Acta," 1947, **30**, 2019) described a new synthesis of *dl*-muscone of best quality similar to the natural ketone. Unfortunately, none of the synthetic muscones has yet been produced on a commercial scale.

The increasing use of odorous acetals in perfume compositions is mainly due to their stability in soaps, creams and other more or less alkaline cosmetics. Their aldehydic odour remains fresh and unchanged on exposure to light and the oxidising action of the air during long storage. Acetals are the condensation products of aldehydes and alcohols, and are softer and more delicate in odour than their parent aldehydes. For example, dihydric alcohols (glycols) form cyclic acetals. They represent a welcome addition to the armamentarium of the perfumer.

Characteristic Acetals

The following is a brief account of the most characteristic acetals:

Phenylacetaldehyde-dimethylacetal has a well-known strong and tenacious odour of green leaves, and is an almost indispensable ingredient in lilac and certain rose perfumes. B.p. $219-221^{\circ}/754$ mm.

Cinnamaldehyde-dimethylacetal has a fine cinnamon-cassia odour which renders it useful in some exclusive fancy perfumes and in oriental types like fleurs de tabac. B.p. $125-127^{\circ}/11$ m.m.

Hydrocinnamaldehyde-dimethylacetal, is said to possess a faint, sweet fruity odour which bears little resemblance to that of the parent aldehyde. B.p. $114^{\circ}/14$ mm.

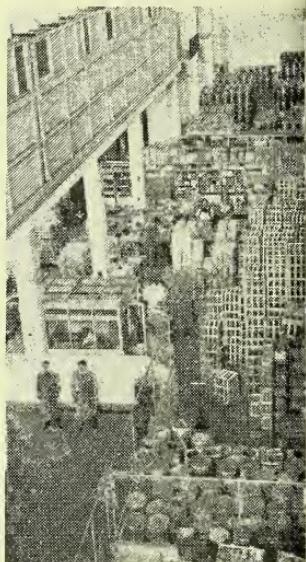
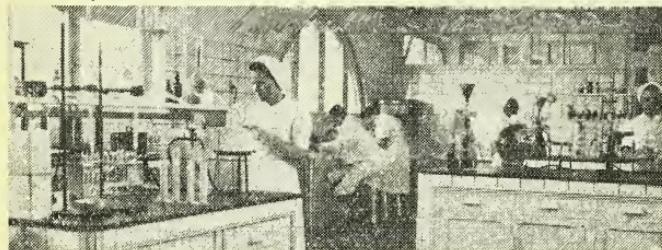
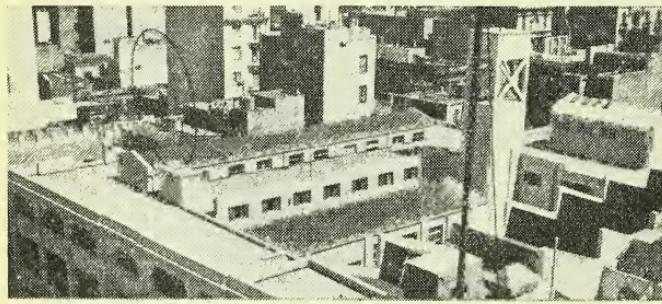
(To be concluded)

A THIRTY-YEAR-OLD "EXPORT DRIVE"

Enterprises of Glaxo Laboratories, Ltd., in Latin America

EARLIER in the year Sir Harry Jephcott (chairman and managing director of Glaxo Laboratories, Ltd., Greenford), completed an extensive tour of the company's South American interests. The company's "export drive" in that

(Argentina) S.A., C. é I., is Mr. R. E. Peley. The list of pharmaceutical products handled by the company includes many which are familiar in Britain. The food products, however, show variations in keeping with local conditions. Many product



The Glaxo works at Buenos Aires, showing (below) the laboratories and (right) the dispatch department

field started shortly after the end of the 1914-18 war, when activities were commenced simultaneously in Brazil, Uruguay, the Argentine and the area of the Caribbean under Mr. Charles C. Richardson. By 1922 the organisation was firmly established. Subsidiary companies were formed.

The office in Havana, Cuba, under Mr. E. L. R. McGough, M.B.E., is responsible for sales in Venezuela, Colombia, Ecuador and Peru; the six Central American Republics and Mexico; and the Dominican Republic and Haiti. In all these valuable dollar markets the company's business has developed considerably since the war.

In Argentina, the centre of the company's widespread activity is at Buenos Aires, where a modern three-storey building housing laboratories and administrative offices, houses a staff of 260. At Chivilcoy, 100 miles from the city, there is a milk-drying plant. The chairman and managing director of *Laboratorios Glaxo*

are mixed or prepared locally, but penicillin, streptomycin, vaccines, Pheniodol, Becadex and all capsules are imported from the factories in the United Kingdom. The area covered by the medical representatives totals 240,000 sq. miles, and delivery of goods from the Buenos Aires dépôt to the furthest outposts—up to 750 miles away—may take up to thirty days.

In Brazil, the Glaxo organisation, established in 1922, has also made considerable progress, especially during the past fifteen years. The president (Mr. M. B. Franco) is at the São Paulo office, though the head office is in Rio de Janeiro, under the direction of Mr. M. B. Palmer (vice-president). Other offices are in Recife (Pernambuco), Bahia and Porto Alegre, with district agencies in all other important cities of the country.

A subsidiary company in Uruguay started activity in 1947, with premises in Montevideo.

TRADE REPORT

Spot quotations for pharmaceutical chemicals represent the prices for wholesale quantities of standard quality. Prices of crude drugs and essential oils vary as to brand or grade.

28 Essex Street, W.C.2, June 21

BUSINESS in most markets has been quiet. A good spot trade, however, has been done in PHARMACEUTICAL and FINE CHEMICALS; prices are little changed on the week, though the advance in PHENOL is expected to be followed shortly by increases in prices of a number of products for which it is a raw material. Higher costs (see p. 782) of glass containers of all kinds may also affect the prices of a wide range of products.

Trade in CRUDE DRUGS has been sluggish. No reports of new-crop Portuguese ERGOT are available, but indications of forward offers have fluctuated between 25s. and 28s., c.i.f. A good spot business has been done in Russian at 20s. per lb., though little is now offering. Moderate trade has been done in Curacao ALOES, and the market continues fully steady; Prime grade Cape is quoted on the spot at from 125s. to 126s. per cwt., while prompt shipment is at 120s., c.i.f. Sumatra BENZOIN is in better request, and spot prices are lower, reflecting easier conditions in the shipment market; no Siam is being offered at present. BUCHU is easier to come forward, but interest is only slight. CAMPHOR remains quiet. There is little CASCARA SAGRADA on the spot; American new peel is offered from origin at from 220s. to 225s. per cwt., c.i.f., while 1949 bark is quoted at from 252s. 6d. to 255s., c.i.f. Nicaraguan IPECACUANHA is firm at source; spot supplies remain small. Chinese RHUBARB is offered from source at 6s. per lb., c.i.f., and business is reported done at about that figure; a small parcel, said to be of good-quality root, and expected to arrive in London on July 16, is quoted at 9s. per lb., duty paid.

No new-crop business is reported in SENEGA, and the spot market continues quiet. A moderate c.i.f. trade is understood to have been passing in wet-crop Tinnevelly SENNA LEAVES at current high prices; Alexandrian PODS are in limited supply and the price asked for fair green medium-sized pods, on the spot, is 5s. per lb. Chinese MENTHOL is easier forward: June-July shipment is quoted at 86s.; July-August at 85s.; and August-September at 82s. 6d. per lb., all c.i.f. London.

In SPICES the main feature has been a substantial decline in PEPPER prices, reflecting reports that larger supplies will be available from Indonesia in the near future. Both African and Jamaican GINGERS are firm. Prices of SEEDS are little changed. CORIANDER is firm with little business reported. A fair Continental inquiry is being received for Cyprus CUMIN. Moroccan seeds generally continue firm, reflecting reports of poor crops. A steady trade has been done in GUMS, and prices

are well maintained; KARAYA remains firm. Prices generally of WAXES have been fully maintained; CARNAUBA is firmer and scarce, and there are no offers from origin.

Business in ESSENTIAL OILS has improved slightly. A moderate spot trade has been done in LEMON; the forward market for Sicilian oil is strong, with prices at upwards from 29s. per lb., c.i.f. Chinese ANISE is in little demand, and orders expected from the Continent have not materialised. Most of the cheap parcels of Chinese PEPPERMINT have been cleared; more offers are being made from source, and quotations are at 37s. per lb., c.i.f., though that price might be shaded.

U.S. Drug and Chemical Report

New York, June 16

LOWER prices were quoted for CREAM OF TARTAR and TARTARIC ACID during the past week, with the appearance of increased quantities of foreign material offering on the market. Recent arrivals of ALOIN from abroad are expected to be the beginning of a steady flow of foreign material into the U.S. PHENOL is dearer by 1 cent. per lb., and there has also been an increase in the prices of both U.S.P. and technical grades of CRESOL of 1½ cents. per lb. CRUDE DRUGS have attracted limited interest and it is thought that traders are awaiting new-crop material in many instances.

There is very little old-crop SENEGA ROOT available. Demand for HYDRASTIS ROOT has been very quiet and quotations have been cut to well under the recent level of \$3.25 per lb. Very little KAMALA is available on the spot and, because of restricted offerings, quotations are nominal. Demand for RHUBARB has been small because of its high price, although quotations are slightly below the peak of \$1 per lb., recorded recently. CARNAUBA WAX has again moved upward and is nearer to the minimum floor level of prices in Brazil, having increased by nearly 15 cents. per lb. in the past few weeks. MERCURY is quiet with dealers in no hurry to buy. In ESSENTIAL OILS markets there has been a good demand for CITRUS OILS. SPEARMINT is a slightly firmer market, because of reports that new-crop oil will cost more. Demand for ANISE is slow with spot prices remaining close to replacement costs. A greater demand for domestic LEMON is expected as a result of the dearth of offerings from foreign sources; small quantities of Italian oils which arrived recently were priced too high to create much interest. SANDALWOOD is arriving in fair quantities from abroad. CORIANDER, NUTMEG and PINENEEDLE OILS are slightly easier.

CORRESPONDENCE

The Glasgow Conference

SIR,—I write on behalf of the Right Worshipful Master and Secretary of Lodge Galen No. 1285, Glasgow, seeking your co-operation in informing pharmacists who will be attending the Conference in September that the above Lodge will be holding a special meeting in the lodge rooms, 100 West Regent Street, Glasgow, at 7.30 p.m. on Thursday, September 7, and that all visitors interested in Scottish Degree work are invited to attend.

COLIN CAMPBELL, M.P.S.

Glasgow, S.W.1.

SIR,—The University of Glasgow authorities have kindly offered to make accommodation at the University's halls of residence available to members of the British Pharmaceutical Conference during the week of the Glasgow meeting which begins on September 4. The halls are centrally situated, and the charge for bed and breakfast for the week is from £3 3s. to £3 10s. Applications for the accommodation should be made immediately to the secretary of the Glasgow Local Committee (Mr. Andrew Officer, 440 St. Vincent Street, Glasgow, C.3).

H. TREVES BROWN,
H. G. ROLFE,

London, W.C.1. General Secretaries.

Lessons of Resale Price Debate

SIR,—Your readers will by now be well aware of the outcome of the House of Commons debate on resale price maintenance on June 16 and I can only hope that it will create a greater awareness of the serious threat to pharmacy that exists as the result of the present Government's approach to organisations such as the Proprietary Articles Trade Association. I wonder, however, whether there is as yet any real appreciation of the position. Last week, learning that the debate was to take place, I arranged to interview at the House three Members of Parliament with whom I was personally acquainted, in order to discuss the whole situation with them and to make certain they were fully aware of our side of the question. One was, of course, the Member for my own constituency. What astounded me was that neither of the other two appeared to have been approached by a single pharmacist from their own constituencies. That fact, taken in conjunction with the knowledge

that only a little over a third of the total Members of the House were present and voted during the debate, leads me to think that greater efforts on the part of pharmacists, especially towards Members likely to be favourably disposed, might easily have secured a larger attendance and possibly a different result. I begin to wonder whether we all realise what the P.A.T.A. really means to us and how much we depend upon its continued existence. Before the advent of the P.A.T.A., for example, Beechams pills costing 10½d. per box wholesale, were being advertised at 9½d. In my opinion, price-cutting today, if taken to the lengths to which it had gone at the time when the P.A.T.A. was formed, would have such effects upon us all that the recent cut in the oncst of N.H.S., about which we are all protesting so strongly (and rightly), would appear small by comparison. May I suggest, therefore, that every pharmacist should make it his duty from now onwards to study the literature available on the subject, for it behoves each of us to see that no opportunity is missed of putting our point of view in the quarters where it is likely to have the most effect.

Yours faithfully,
H. G. MOSS.
Feltham.

Bulgarian Rose Oil

THE Bulgarian Legation, London, advise us that in their recent letter (see *C. & D.*, June 10, p. 741) the price given for rose oil was incorrect owing to a typewriting error. The correct price is £393 per kilo net, f.o.b. airport Bulgaria.

TRADE MARKS

(From the "Trade Marks Journal," June 7)

For bandaging material and bandages, medical and surgical plasters and surgical dressings (5).—"BACTO-PROOF" "PERMEAFILM"; by T. J. Smith & Nephew, Ltd., Hull; 687,514-6.

For photographic apparatus (9).—"SIGNET"; by Kodak, Ltd., London, W.C.2; 684,416.

For non-medicated toilet paper (16).—"WHITE ROSE" on label device of rose; by Medicated Paper and Chemical Co., Ltd., Sheffield; B685,347.

(From the "Trade Marks Journal," June 14)

For industrial chemicals (1).—"FLORAX"; by Imperial Chemical Industries, Ltd., London, S.W.1; 678,494.—"COALINE" "COALENE"; by Coalite and Chemical Products, Ltd., London, S.W.1; 681,523-24.

For non-medicated paper towels and paper towelling (16).—"HI-DRI" in distinctive lettering; by Hygiene Products (Great Britain), Ltd., London, S.W.1; B682,948.

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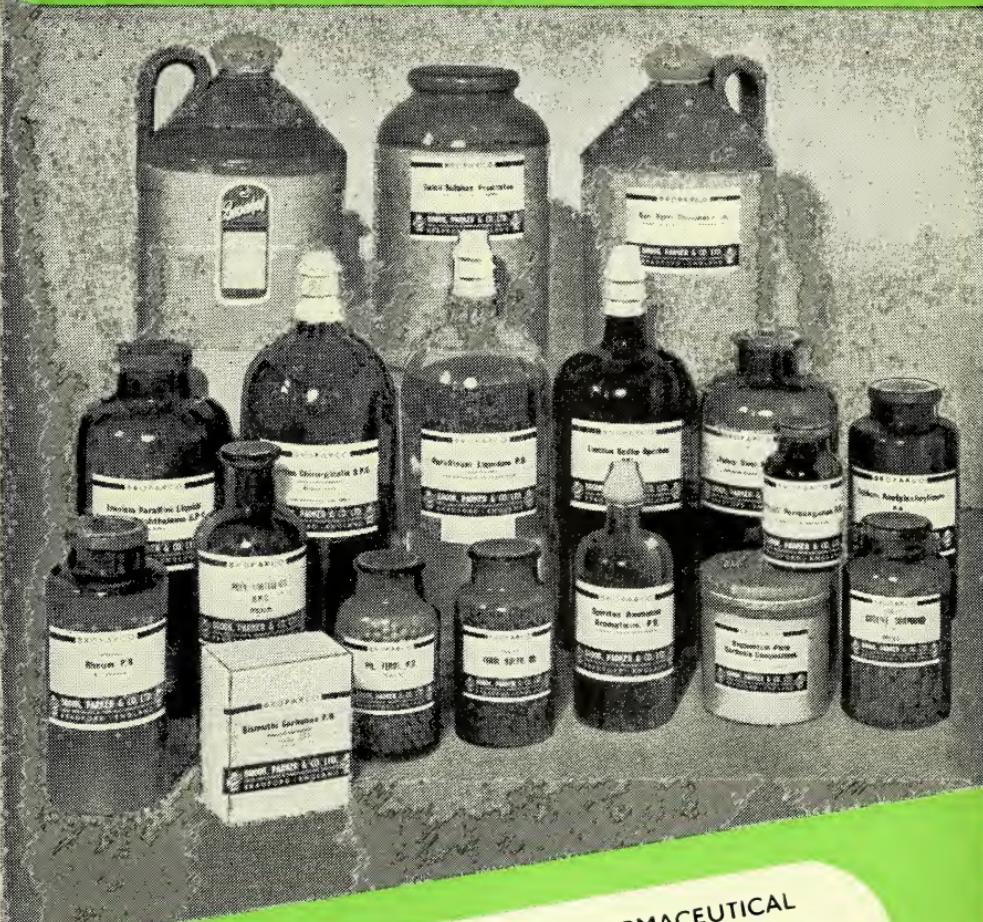
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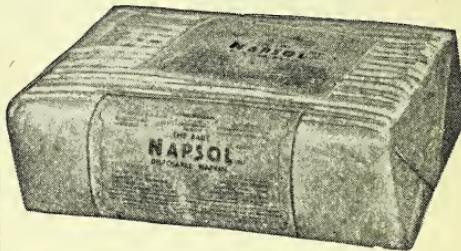
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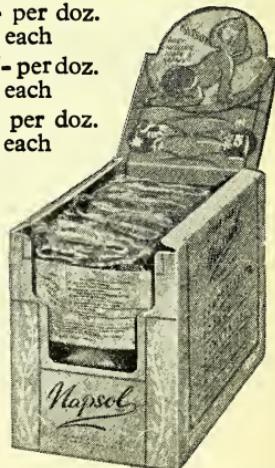
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STEEL STORAGE EQUIPMENT

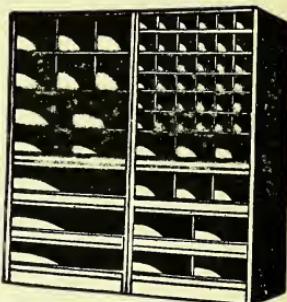
FOR FACTORIES AND STORES

SECO Steel Equipment is suitable for all storage requirements, giving maximum storage capacity in the minimum floor space. A SECO Standard Unit is available to suit your every storage need. All units can be easily assembled with a screwdriver and spanner by unskilled labour on site. We also undertake the production and installation of storage equipment to customers' own specifications. The illustrations show a few standard units from the SECO Range. Send for List C.D.

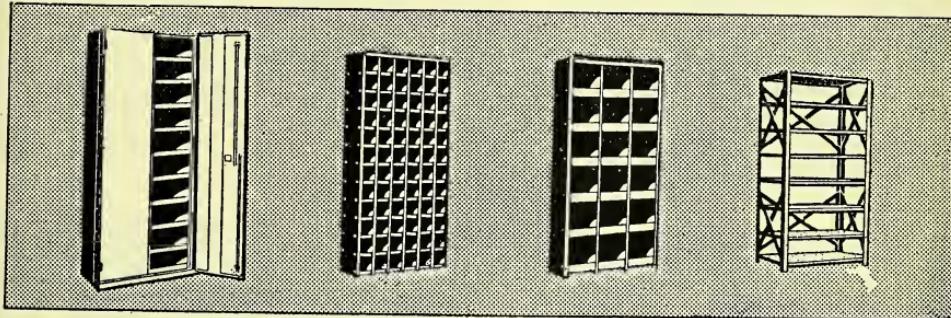
The STEEL EQUIPMENT CO., LTD

Greets Green, West Bromwich, Staffs.

Phone: TIPTON 1137-89 Grams: Equipit, West Bromwich



UNIT No. 950/1



L.G.B.

Tie up today with this big seller of tomorrow.

Dyequick MEANS BUSINESS

— the NEW home dye with a brilliant future

Write for full-colour illustrated folder to:

DYEQUICK PRODUCTS LTD., 122 Newgate Street, London, E.C.1
or your usual Wholesaler



Regd Design

6 oz. Best
White Sulphite

SEND FOR
SAMPLE ROLL
and
COUNTER
DISPLAY
STAND

HUNT & COLLEYS LIMITED
HUCKNALL RD., NOTTINGHAM. Tel. 61088-9

SURGICAL DRESSINGS

Send your enquiries to:

CROSSKILLS OF NORWICH

The main distributors for the Eastern Area

LARGE STOCKS



PROMPT SERVICE

COMPRESSED MEDICINAL & OTHER TABLETS

Made to any shape or size up to
 $1\frac{1}{2}$ " (bulk or packed)

Private Formulae Compounded by
Experts

Telephone :
CANonbury 3401

BUCKLEY-BOWKER TABLET CO. LTD
29 PARKFIELD STREET · LONDON · N.I
ESTABLISHED OVER A QUARTER OF A CENTURY

The Manufacture of
CONTRACEPTIVE FOAM TABLETS

has been one of our Specialities for
many years.

Enquiries Invited.

Success story!

ZAL, most perfect of Pine disinfectants, was introduced last year with phenomenal success. Orders and repeat orders poured in. The reason? *People recognise real superiority.*

ZAL, backed by over 60 years' experience of disinfectant manufacture, has no equal. And now—full steam ahead for 1950. Powerful national advertising, brilliant counter display aids—and so bigger public demand. Look to your stocks!

Ah—but
ZAL
PINE FRESHNESS
comes with
all these other
advantages!



It's sweet and pleasant, leaving quite the most delightful pine smell. It disinfects thoroughly without staining, harming nothing but germs. And as for economy! It costs only 1/- a bottle.

1/- a bottle
Extra large size 1/6

An old Product, backed by 60 years' experience of disinfectant manufacture

Just one of the big-space advertisements that will appear nationally.

ZAL SCORES 5 TIMES

1. Housewives like its sweet smell *better*.
2. Housewives like its clear golden colour *better*.
3. Housewives like its prestige—Zal is a Newton Chambers product, belongs to the family of finest germicides.
4. Housewives like the big value 1/- bottle.
5. Housewives like safety—Zal is 3 times more effective than carbolic—yet cannot harm persons or things.

The Latest Development in CHEMICAL SANITATION

Racasan is not just another disinfectant . . . it is a concentrated Sanitary Fluid specially prepared for use in any type of Pail or Chemical closet. It is completely odourless, a powerful germicide, and its unique self-cleaning properties make the task of emptying and cleansing the toilet simple and unobjectionable. More and more people are demanding this fast moving line. Make sure of your summer stocks NOW

★ NO POISON LICENCE REQUIRED ★ GENEROUS DISCOUNTS

- ★ WELL ADVERTISED
- ★ 4 HANDY SIZES



The RACASAN Non-Flush Toilet

This modern, streamlined toilet is a complete break away from the old fashioned type of chemical closet. Easy to maintain, and simple to empty, it is an ideal toilet where there are no drains.

WRITE
TODAY
FOR
DETAILS



RACASAN

SELF CLEANING SANITARY FLUID

Ask your usual Factor or Wholesaler for full details or write:-
RACASAN LIMITED • ELLISMORE PORT • CHESHIRE

'WEBSTER'S'

STAINLESS STEELWARE

Specialists in modern equipment for manufacturers, i.e., Funnels, Buckets, Jugs, Mixing Containers, Measures, Percolators, Bogies, etc., etc. Suppliers of Stainless Steel utensils, at prices which enable the user to employ them in place of other metals as an economical proposition.

The use of Stainless Steel equipment, designed on modern principles, enables overhead costs to be reduced and makes for more convenient and better working conditions.



ISAAC WEBSTER & SONS, LTD.
ABBEY WORKS, KIRKSTALL, LEEDS
Phone : 51580 Leeds. Grams: Isaac Webster, Kirkstall

Medical Bottles

All Descriptions—

**FLATS, VIALS, POISONS,
PANELS, JARS and CORKS**

HOSPITALS and CHEMISTS
RECEIVE
OUR SPECIAL ATTENTION

QUICK DELIVERY THROUGHOUT
HOME and SOUTHERN COUNTIES

Write:

GEO. RICHARDSON MEDICAL BOTTLES LTD

802/4 SEVEN SISTERS ROAD, LONDON, N.15
Phone: Stamford Hill 7447

Harris Hart

THE NAME THAT
STANDS OUT FOR

EPSOM

SALTS B.P.

and Technical

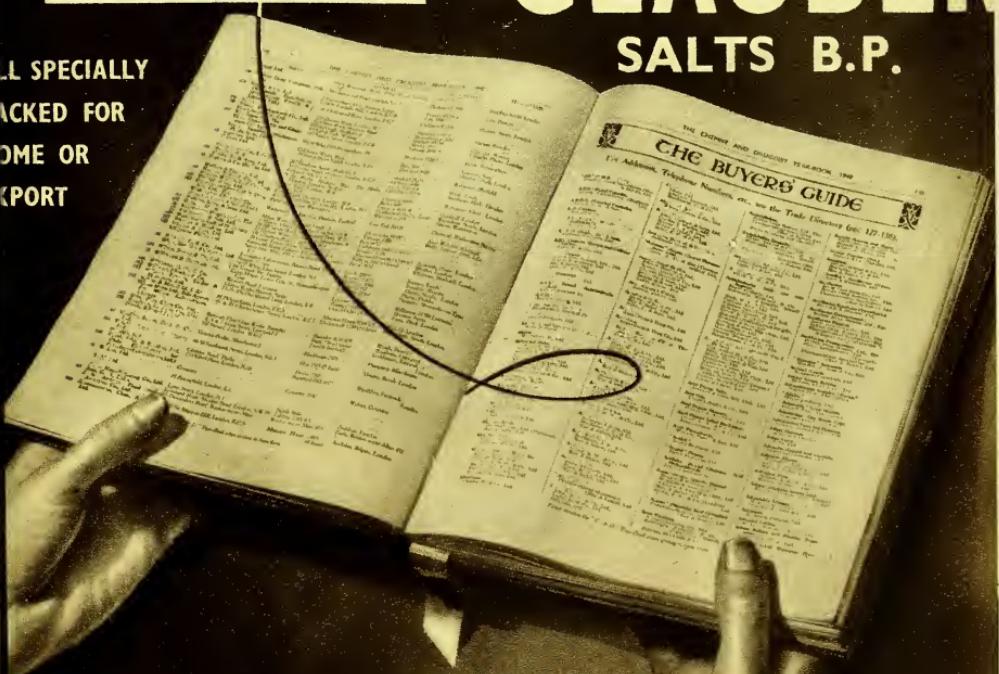
GLAUBER

SALTS B.P.

Special Qualities for
Bath and Veterinary uses.
Special types of crystals
matched and any degree
of exsiccation to order.

Pea or Feathery Crystals.

ALL SPECIALLY
PACKED FOR
HOME OR
EXPORT



HARRIS, HART & CO., LTD.

GREGGE STREET WORKS
HEYWOOD, LANCASHIRE

Telephones: Heywood 6570 Telegrams: Harp, Heywood, Lancs.

There's no business like SHOW Business



**-FOR THE MORE
YOU SHOW THE
MORE YOU SELL**

Day in, day out, these firmly established popular Veno products are heavily advertised in the national and provincial press and magazines. A window or counter display of the Veno products recalls the need, and the need determines the purchase. More displays mean more business, yielding a very attractive margin of profit.

TERMS. £3 combined order
10% display allowance plus 2½%
for cash in 30 days. New attractive
showcards now available.

Phensic Veno's Cassell's
Germolene Germoloids

VENO DRUG CO. LTD., ST. HELENS, LANCASHIRE

The Veno Drug Co. Ltd. is authorised selling agent for Phensic Ltd.

Asthma and RIDDOBRON

Inhalation Therapy have become one associated idea whenever the most efficient treatment is required

★ NOW SUPPLIED IN THREE SIZES—12.5 gm.; 25 gm.; 100 gm.



ASTHMATOR



P.A.T.A.

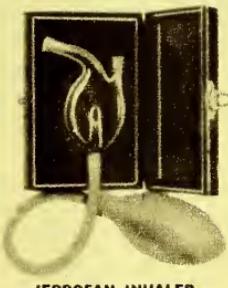
DRITAX HAND INHALER



RIDDOBAG

RIDDELL'SALL BRITISH
PATENTED**INHALERS FOR EVERY PURPOSE**

GUARANTEE
THE BEST RESULTS
AS THEY ENSURE
THE FINEST
POSSIBLE
ATOMISATION



JERROFAN INHALER

OTHER INHALERS
ARE
RIDDOCILLIN,
PENICILLIN DRITAX,
PAG PUMP (HAND)
INHALERS



SUPER PAG INHALER

*Full range
of Inhalers to
suit the Home,
Office, Clinic,
Surgery
or Hospital*



PNEUMOSTAT ELECTRIC INHALER

RIDDELL PRODUCTS LTD

"The Leading House for Inhalation Therapy."

AXTELL HOUSE, WARWICK STREET, LONDON, W.I

Telephone: GERRARD 3754.

Telegrams: PNEUMOSTAT, PICCY, LONDON

MANCHESTER BRANCH: 11 Mansfield Chambers, St. Ann's Square, Manchester, 2

Glass containers
of quality



We specialise in the manufacture of glass containers for the Drug Trade and the wide range of industries associated therewith. An immense variety of moulds are available and we shall be pleased to advise on any glass packaging problem.

Wholesale and Export Only

LAX & SHAW LTD

REGD. OFFICES: Scott House, 69, South Accommodation Road, LEEDS, 10.

Telephone : 21568 (2 lines) Telegrams Feeders : (Phone) Leeds 10.

LONDON OFFICE: 29 Ludgate Hill, E.C.4.

Telephone , CITY 7170



in a matter of seconds!

A new and potent adrenaline derivative providing almost instant relief from even the most severe of asthmatic attacks.

Of special interest is the Combination Pack containing bottle of 15 ml. solution and the new NEBULIZER, designed by a specialist.

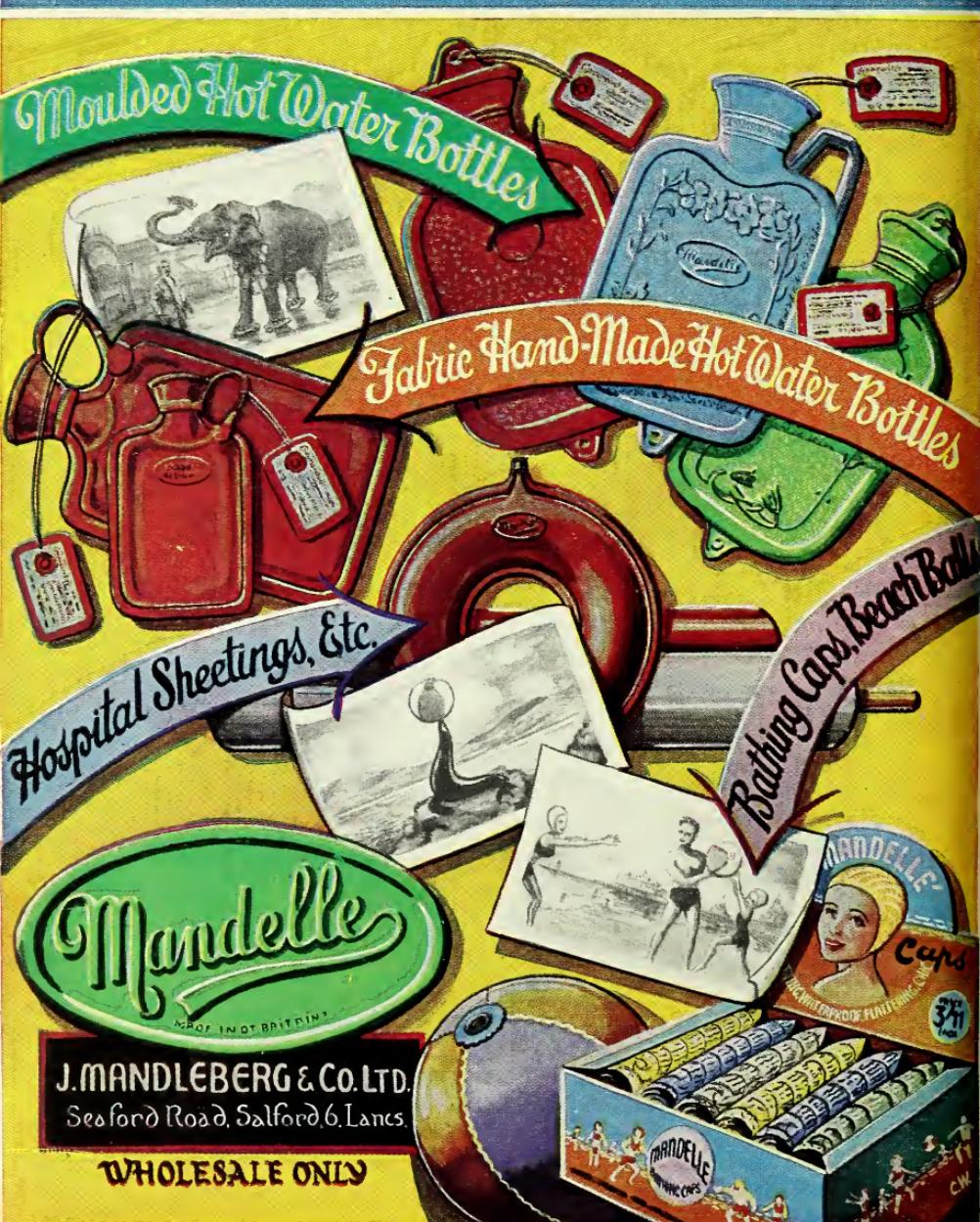
Tablets, 20 mg : bottles of 50, 250. Solution : bottles 1%, 15 ml. Combination pack : bottle of 15 ml. solution with nebulizer.

'ISUPREN'

*Trade Mark. Brand of
Isoprenaline HCl.*

This product is being extensively advertised to the Medical Profession.

BAYER PRODUCTS LTD., AFRICA HOUSE, KINGSWAY, LONDON, W.C.2



Pygmalion

THE CHEMIST AND DRUGGIST June 24, 1937

CREATION

Roll Top, No. 1964. Fleur de Lys design with assorted coloured stones, $3\frac{1}{2}'' \times 2\frac{1}{2}''$

Happy Landing. No. 1952. (Towns)
Assorted colours and labels,
3" diameter.



Please order from your wholesaler:
S. D. RAND LTD.
5-6 ARGYLL ST., OXFORD CIRCUS
LONDON, W.I.

Phone: GERrard 3746-2801 Cables: Randperle, London

CALOX

TOOTH POWDER

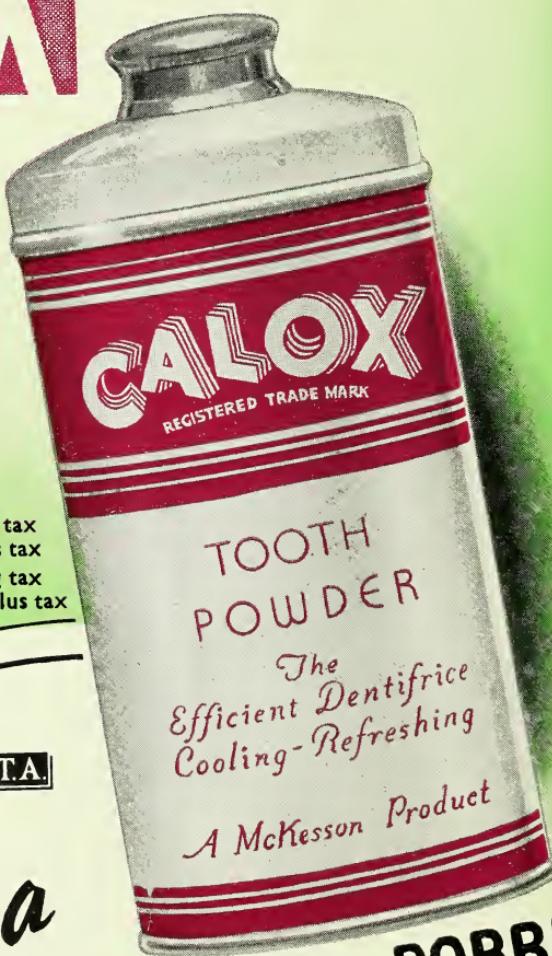
The perfect cleansing medium for the teeth and mouth.

Polishes without injuring. Invaluable for smokers, breath sweetening.

Economical. Cuts the dentifrice bill in half. Generous profits.

Flat tin....Retail 11d. including tax
Cost 6/- per doz. plus tax

Sprinkler ..Retail 1/10 including tax
Cost 12/- per doz. plus tax



P.A.T.A.

It's a

M^c KESSION & ROBBINS

McKESSION & ROBBINS LTD

Albolene CLEANSING CREAM

... the pure skin cleanser with no "show off" ingredients

originally made for doctors
is MEDICALLY PURE!

...n't turn rancid — remains
nd and pure indefinitely.
perfect base for powder.
endid for men with tender
ns after shaving.
valuable for massaging.

z. size.....Retail 4/3 includ-
ing tax
Cost 20/- per doz.
plus tax
fessional size..Retail 10/- includ-
ing tax
Cost 48/- per doz.
plus tax



Product!

... the best of its kind

ingle House, Cannon Street, London, E.C.4

a little for the Home Market...

THE BRITISH FILM WITH THE
LABORATORY BACKGROUND



FILMOT roll films

a high grade ORTHOCHROME film
of British Manufacture

STANDARD 8 EXPOSURES

In the following sizes

S 20	|	S 62
S 27	|	S 29
		S 16



The name of STEDMANS
is your guarantee of
quality - every film
being batched and date
stamped

Send for Price List showing
prices and terms for Dealers

STEDMANS

CINEMATOGRAPHIC LABORATORY LIMITED

WALWORTH LONDON SE17



A COMPELLING LINK

The 'Jenner's' advertising regularly appearing in National Media, including Punch, News of the World, the Daily Mail and the Sunday Dispatch, is now being supplemented by film advertising, in the leading Cinemas in many parts of the country. An attractive window display will attract an increasing proportion of the growing sales to your counters.

Write for particulars of our Window Display Service. We supply all necessary material and, in many districts, the free services of an Expert to dress the window for you.

SAVORY & MOORE
STANDARD WORKS
LAWRENCE RD., LONDON, N.15
"PHONE: STAMFORD HILL 3456
'GRAMS: "NUSALIN" SOUTHOT LONDON

Dr. JENNER'S for Indigestion

NEW

Toni

SPIN Curlers



prove best-selling certainty!

Another profit-maker for you!

TONI

JUNIOR REFILL

For odd end curls and tidying-up between perms. Contains waving lotion, end papers and neutralizer for 14 to 18 curlers. Trade Price 2/-. Purchase Tax (100%) 2/-.

Retail Price 5/- (incl. Pur. Tax)

Millions of American women use Toni with the new SPIN Curlers. Actual sales in the United States prove this. These same SPIN Curler Kits are being introduced in Britain too. It's the most exciting development since Toni Home Perm was first introduced. It will boost over-all Toni sales everywhere.

Backed by all-out advertising effort

Toni with new SPIN Curlers will be backed by the heaviest concentration of advertising in the history of Toni in this country—at a time when most women want and need a new perm!

Make sure your stocks of the full Toni range—including Standard Curler Kits and Refill Kits—are adequate to meet the demand.

Feature

TONI Home Permanent

with new

SPIN Curlers

Trade Price 6/8

Pur.Tax(100%) 6/8

RETAIL PRICE 16/8
(incl. Purchase Tax)

Includes six
Midget SPIN
Curlers for winding neck-line hair



100
STANDARD
Saccharin TABLETS

The Wallis Laboratory Ltd.
58 King Georges Avenue,
Watford, Herts.

100
STANDARD

Saccharin TABLETS

The Wallis Laboratory Ltd.
58 King Georges Avenue,
Watford, Herts.

for
**SPECIALIST
TABLET MAKING**

THE
WALLIS LABORATORY LTD.

Manufacturers of
'UMEDONIA'
ANTI-PAIN TABLETS

THE WALLIS LABORATORY LTD.

58 King George's Avenue, Watford, Herts.

Always the Lowest Prices

100
STANDARD

Saccharin TABLETS

The Wallis Laboratory Ltd.
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Watford, Herts.

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Saccharin TABLETS

The Wallis Laboratory Ltd.
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Watford, Herts.



PHARMACEUTICAL CHEMICALS ALKALOIDS · DRUGS · OILS



Manufacturers of

***p*-AMINO BENZOIC ACID BENZAMINE**

(Pure—Hydrochloride—Lactate)

BENZOCAIN CUPFERRON

METHYL ACETANILID

***p*-NITRO BENZOIC ACID**

THEOPHYLLINE PURE

THEOPHYLLINE ETHYLENE DIAMINE

THYMOL IODIDE

BULK & PACKED

IMPORT & EXPORT

HUFFER & SMITH LTD
WHOLESALE & MANUFACTURING CHEMISTS
CROYDON, ENGLAND

TELEPHONE:

THORNTON HEATH 4266-7

TELEGRAMS:

HAHU, THORNTON HEATH SANTONINIC THORNTON HEATH

The BEATSON MEDICAL

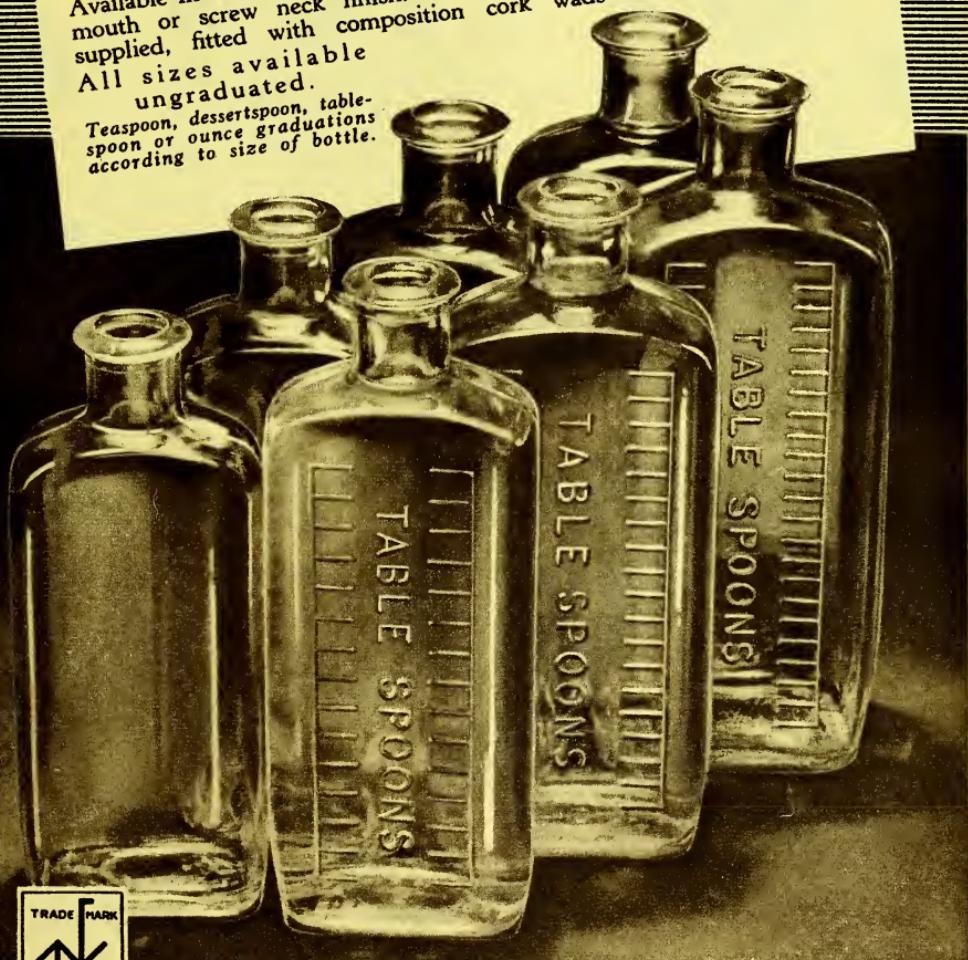
outstanding features :

- Pleasing modern design
- Absence of sharp corners inside the bottle allows sediment to be dispersed more rapidly by shaking
- Fits snugly into the hand
- "Vial" lip for easy pouring.

Available in all usual sizes from 1 to 20 oz. inclusive, with either cork mouth or screw neck finish. White enamel or black plastic caps supplied, fitted with composition cork wads faced with ceresine.

All sizes available
ungraduated.

Teaspoon, dessertspoon, table-spoon or ounce graduations according to size of bottle.



BEATSON, CLARK & CO. LTD
MANUFACTURERS OF CHEMICAL AND MEDICAL GLASS
ROOTHERHAM

Established 1751 YORKS



Tuition in

OPTICS

A long and honourable roll of successes.
Write to me personally for full particulars

C. A. SCURR

50, HIGH STREET, BARNET,
LONDON, N.

TELEPHONE:
0961 BARNET

TELEGRAMS:
"SCURR, BARNET"

BENGUE'S DISPENSING PACKS

ACIDOTAN	...	...	80 Tablets	NEO-PASSIORINE	...	500 Tablets
AGOCHOLINE	...	...	160 Tablets	NESTOSYL	...	1 lb. Jars
ANACLASINE	...	...	500 Tablets	OPOBYL	...	250 Pills
ANAXERYL	...	...	1 lb. Jars	OPOCALCIUM	...	500 Tablets
BENGUE'S BALSAM	...	...	1 lb. Jars	OPOCALCIUM	IRRADIATED	500 Tablets
BENGUE'S DRAGEES	...	500 Dragees		PASSIORINE	...	1 lb. Bottle
BENTONYL	...	250 Pills				Winchester Quart
BORNOLIN	...	...	1 lb. Jars	PULMO-BAILLY	...	1 lb. Bottle
CHOLPHYTONE	...	500 Dragees		RHINAMID	...	8 oz. Bottle
COROSEDINE	...	500 Tablets		SEDALBY	...	Winchester Quart
DESCLERAN	...	250 Tablets		TENSEDINE	...	250 Tablets
DIUROPHYLLINE	...	500 Tablets			...	500 Tablets
METANIUM	...	1 lb. Jars				

Please ask for a Trade Price List

BENGUE & CO. LTD., Manfg. Chemists Mount Pleasant, ALPERTON, MDX.

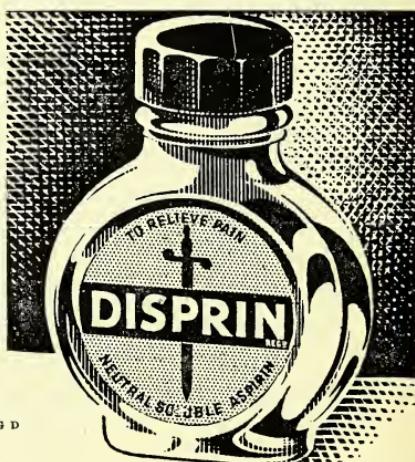
A S P I R I N is an acidic substance, sparingly soluble.

D I S P R I N is neutral, stable, soluble—and palatable.

The reasons for preferring calcium aspirin to aspirin lie chiefly in the fact that it is a neutral, soluble and bland compound, whereas aspirin is acidic, sparingly soluble and may act as a gastric irritant.

But calcium aspirin has a defect of its own—chemical instability; and in consequence attempts to manufacture it in the form of tablets that could be depended upon to remain free of nauseous breakdown products, under reasonable conditions of storage, have hitherto met with little success. These difficulties have now been overcome. 'Disprin,' a stable, tablet preparation, readily dissolves to yield a substantially neutral and palatable solution of calcium aspirin that can be prescribed in all conditions in which acetylsalicylate administration is indicated.

Extended clinical trials show that Disprin in massive dosage, even over long periods, can be tolerated without the development of gastric or systemic disturbances except in cases of extreme hypersensitivity.



D I S P R I N REGD

Neutral, stable, soluble, palatable calcium aspirin

On prescription Disprin is free of Purchase Tax.

Clinical sample and literature supplied on application.

PEBOC LTD.
MANUFACTURERS OF
VITAMIN D₃

Enquiries
to
SALES OFFICE,
629, TOWER BUILDING,
WATER STREET,
LIVERPOOL 3.

●

LABORATORIES · GREENFORD · MIDDX

COLCHICINE

B.P., U.S.P.

For use in Treatment
of
GOUT, ASTHMA, CEREBRAL
CONGESTION and URAEMIA

d-Tubocurarine Chloride

The Pure Crystalline Alkaloid
for securing Muscular Relaxa-
tion in Surgical Operations
and Shock Therapy.

Manufactured by:

PAL CHEMICALS LTD.
PALORIT HOUSE, 11 HARROW RD., LONDON, W.2
PADdington 8261



MANOIDS

NEVROIDS

**URICURE
TABLETS**

All 1/3 lines, costing 8/- doz. (plus purchase tax). Showing nearly 50% profit.
Sell steadily and always give satisfaction.

ONLY SUPPLIED TO QUALIFIED CHEMISTS

THE ACTON PILL AND TABLET CO. LTD., ASH VALE, SURREY

CLINITEST

TRADE MARK

**The unique one-minute test
for detecting urine sugar**

now made in Britain

The rapidly increasing use of 'CLINITEST' (brand) for detecting urine-sugar, has made it necessary to establish manufacturing facilities in the British Isles. Heretofore, 'CLINITEST' has been imported from America.

This unique copper reduction test is based upon the same principles involved in the Benedict Test, but has all the reagents compressed into a single tablet. No external heating is required as the tablet generates its own heat. The complete test takes less than one minute. 'CLINITEST' has been approved by the Medical

Advisory Committee of the Diabetic Association.

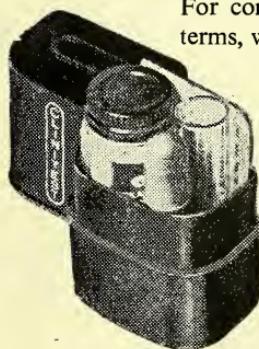
The use of 'CLINITEST' is spreading rapidly among Doctors and Diabetics as a result of advertisements in the Medical Journals, the Diabetic Journal, and by personal recommendation.

A supply of illustrated leaflets for distribution to the public with all sales of insulin and other diabetic products will be sent with all orders. For complete information, including trade terms, write to the

Sole Distributors:

DON S. MOMAND LTD
57 ALBANY STREET, LONDON, N.W.

Complete Set
with 36 tablets,
Price - 12/-



Refill Bottles
(36 tablets)
Price - 4/-



A PRODUCT OF THE AMES COMPANY INC.

**Selected by the Council of Industrial Design
for the 1951 Festival of Britain
Stock List . . .**



**THE NEW 'FREEZEHEAT'
*Swinkup***

The newest style in Vacuum Flasks. This unique model has TWO Koolgrip (Reg. Des. 856335) cups compactly fitted—one at each end. Smart and original design in brilliant colourings and combinations highlight the most elegant flask yet seen.

The Foursome "Picnicmaster" sets are now available as well as the well known Freezeheat flasks (in tartan) and Vacuum Jugs.



THE BRITISH VACUUM FLASK CO., LTD.

LISSENDEN WORKS, GORDON HOUSE ROAD, LONDON, N.W.5, ENGLAND

**BLYTON, ASTLEY
& CO. LTD.**

MANUFACTURE

**LOZENGES - PASTILLES
TABLETS etc.**

AND OFFER A

Wide range of own name packs

AS WELL AS

**MENTHELLS - DIGESTELS
& "I.G.T. SAFEGUARDS"**

We specially cater for Retail Chemists who are interested in developing their own individual lines. For further details apply to :

EAGLE LABORATORIES

**LOWER BROUGHTON
SALFORD, 7, LANCS.**

Telegrams: "TROCHES, MANCHESTER"
Telephone : BLACKFRIARS 9848

**FOR DESTROYING RATS and MICE
HALLER'S EXTRACT OF SQUILL**

is always in demand as it is a standard product, controlled by Bio-assay tests.

**For the destruction of
Beetles, Cockroaches, Crickets, etc.,**

USE

"DANZO BEETLE POWDER"

"CADOG"

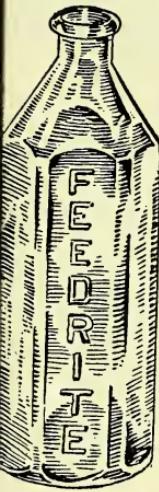
Parasiticide and Insecticide in liquid form destroys all kinds of noxious insects :—

Bugs, Lice, Fleas, Moths, etc.

Address all enquiries for preparations for the destruction of Domestic Pests to :—

**HALLER LABORATORIES, LIMITED
325, BOROUGH HIGH STREET, LONDON, S.E.1**

It stands to reason the "FEEDRITE" sells



- ★ The FEEDRITE Baby Feeder keeps baby's milk at the correct temperature right through the feed, thus eliminating gripe and wind, caused by baby drinking cool milk.
- ★ No need to reheat milk half way through feed.
- ★ Supplied with FEEDRITE Bottle and FEEDRITE Anti-Colic Teat.
- ★ Approved by Hospital Authorities and Clinics.

RETAIL PRICES

FEEDRITE COMPLETE BABY FEEDER	- - - -	4/6
FEEDRITE ANTI-COLIC TEATS	- - - -	6d.
FEEDRITE SPARE BOTTLES	- - - -	1/-
FEEDRITE SPARE THERMAL HEAT RETAINING PADS	1/-	per set

NOTE

The FEEDRITE BOTTLE should be sterilized with MILTON ANTISEPTIC SOLUTION and why not sell a bottle of MILTON with every FEEDRITE Baby Feeder.

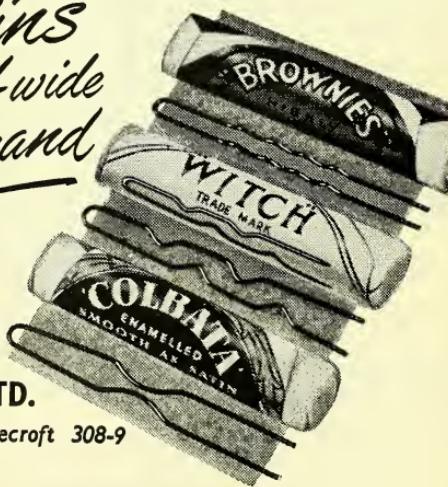


MORLEY ROGERS (FEEDRITE) LTD.
300 KINGSTON ROAD · LONDON · S.W.20



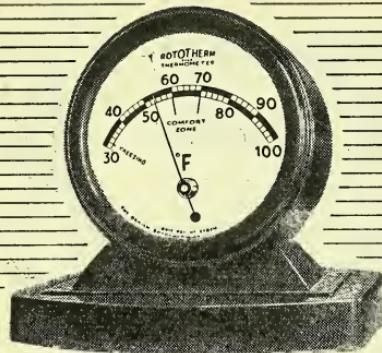
*High Quality
Hair Pins
- in world-wide
demand*

Sales steadily increase as more women discover the excellence of these three famous brands.



THE WHITECROFT PIN MFG. CO. LTD.

Whitecroft, Gloucestershire. Tel: Whitecroft 308-9

**THE 'MERTON' THERMOMETER**

A sure seller at all times, this model forms the ideal and practical gift for desk or table use. Available in attractive Plastic case and choice of colours, also in hand-painted designs.

The world's best thermometer
Price 15/- Retail

Rototherm

DIAL THERMOMETERS

THE BRITISH ROTOTHERM COMPANY LIMITED
Merton Abbey, London, S.W.19. Tele: LIBerty 3406

**GENUINE & GUARANTEED MOTH LARVAECIDE**

In Solution, per 1-gal. Tins @ 22/6d. gal.

," 40-gal. Drums @ 21/-.

In Crystals, per 7-lb. parcel @ 1/6d. lb.

," 28-lb. parcel @ 1/5d. "

," Cwt. drum @ 1/3d. "

All Drums returnable, Paid Home.

CHEMICAL MNFG. LABORATORY LTD.

Duke Street, Tavistock, Devon

*How to sell
more Sparklets Bulbs!*



Offer your customers the **Sparklets Syphon Repair Service** . . . even the most dilapidated syphon can now be rebuilt as new. It's not just a case of "make do and mend" — it's sound business

★ Write for showcard and list of repair charge

SPARKLETS

Sparklets Ltd., Service Dept.,
EDMONTON, LONDON, N.18

RENOVATION
AND REPAIR
SERVICE

INDUSTRIAL PROTECTIVE WEAR FOR EVERY PURPOSE

Standard or to specification

ESCO (RUBBER) LIMITED
2 STOOTHARD PLACE, BISHOPSGATE,
LONDON, E.C.2

PRE-PACKING & LABELLING

(We can now accept fresh orders)

LIQUIDS: From Bulk into any size bottle
from $\frac{1}{2}$ oz.

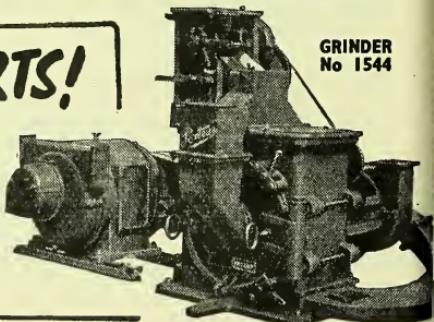
POWDERS & Mixed and packed to customers
TABLETS: Specifications.

J. H. WISEMAN & CO. LTD.
100 Blackstock Rd., Finsbury Pk., N.4 Canonbury 5877

CALL IN THE EXPERTS!

The best way to ensure satisfaction in grinding is to call in the experts—Porteus. Not only do they know what exactly is required, but they can and do invariably advise on the best type for the job in hand. Lengthy experience in design and construction is at your service—why not write now?

GEORGE PORTEUS & Sons (Leeds) Ltd.
LEEDS BRIDGE WORKS, LEEDS 10



G.P.7

SPRAYS, ATOMISERS AND PERFUME SPRAYS

We specialize in the manufacture of all kinds of sprays. Besides our well-known standard products we are prepared to undertake the manufacture of patterns to customers' own design or specification

Entirely British Made



Actual Manufacturers

Supplies available from
your wholesaler.

SAMCO Atomisers and Sprays differ from types in general use in that each model is a Scientific instrument specially designed to handle all types of spraying compounds without the necessity to adjust the nozzle of the instrument in any way.

Each instrument is manufactured and assembled to mathematically exact limits thereby assuring uniform performance.

Materials of the finest quality only are used and all components in direct contact with fluids are made pure nickel, which is impervious to every known substance used in medical prescriptions.

All components are heavily chromium plated.

All SAMCO models are pressure operated, thus ensuring complete atomisation.

S. MURRAY & Co. Ltd.

ST. PANCRAS WAY, LONDON, N.W.1

Phone : EUSton 1757 & 5514

more customers - more profits!



By using Shomore Equipment you can build up inviting modern displays that will attract extra custom to your shop and extra profits to your till.

Write NOW for free copy
of the Shomore booklet
**"LOOK BEYOND
YOUR WINDOWS"**

Sell more by 'shomore'

PARNALL & SONS LTD.
LODGE CAUSEWAY • FISHPONDS • BRISTOL

BIGGEST-EVER IBCOL CAMPAIGN

means Biggest-ever Profits for you!

Here's why you profit more..

- 1 Last year Ibcoll sales increased by over 250% thanks to a quality product backed by extensive advertising and displays in shops.
- 2 This year sees Ibcoll advertising intensified — even bigger. And with still more display in your shop, that means even bigger sales for you!

Because of constant advertising, more and more housewives are buying Ibcoll. And they go on buying it — because they prefer the pleasant, refreshing fragrance of this more effective germicide-disinfectant, and because they find it more economical, too.

New Ibcoll advertising will be bigger than ever — starting off with powerful half-

First move in a new campaign
to sell even more Ibcoll —
**HALF-PAGES IN
DAILY EXPRESS
AND
REYNOLDS NEWS**

pages in the Daily Express and Reynolds News. That means more sales, more profit for you. Ibcoll advertising will tell women to look out for the Ibcoll display carton — so display it on your counter, ready for them. To help you even more, reprints of the Daily Express half-page are available for display in your windows.

You have only to display IBCOL to sell it

NOW! STARRING IN AN

ALL IMPORTANT ROLL

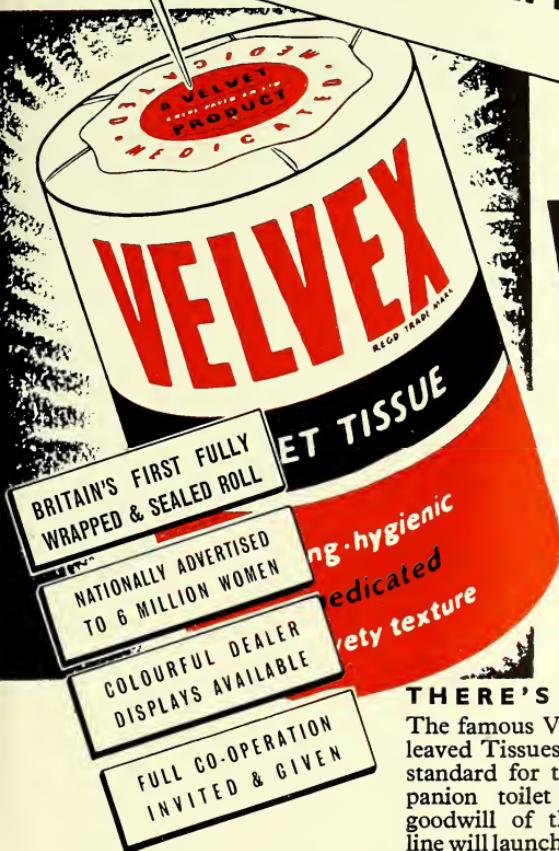


that's different . . .

THE NEW



MEDICATED, FULLY WRAPPED & SEALED

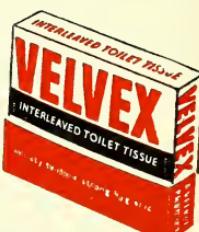


VELVEX ROLL

Representing all that we have striven to achieve in our manufacturing processes — the scrupulous cleanliness that this product demands — VELVEX, in the new red wrapper, is a quality toilet paper at a popular price. Completely wrapped, it is fully protected against the hazards of contamination in transit and storage.

THERE'S A FAMILY 'LIKENESS'

The famous VELVEX Interleaved Tissues set the quality standard for their new companion toilet roll, and the goodwill of this established line will launch the fully wrapped VELVEX ROLL towards equal heights of popular demand. ORDER NOW from your usual wholesaler FOR IMMEDIATE DELIVERY.



NOTE: As from March 1st VELVEX Interleaved Roll was discontinued. Fully wrapped red label VELVEX are the same price, same quality—with a new and unlimited sales potential.

WANTED

Empty Stergene Bottles

*Handling Allowance on Empties
Pushes Profit Margin Up*

Empty Stergene bottles are urgently required. Growing demand for Stergene makes it important that all empty bottles are returned. Remember — every dozen bottles collected by the Domestos Ltd. representative qualifies for the special Handling Allowance recently introduced. So every empty bottle returned actually increases your Stergene profit margin. Urge your customers to bring back an empty Stergene bottle every time they buy a new one.



AT YOUR SERVICE



Domestos Limited service ensures regular delivery of Domestos and Stergene and regular collection of all empty bottles.

Stergene

SCIENCE IN CLEANSING

A PRODUCT OF DOMESTOS LIMITED,
NEWCASTLE UPON TYNE, 6.

MOULDED CLOSURES

mit designs or models of moulded

to

r.

ratory recommends

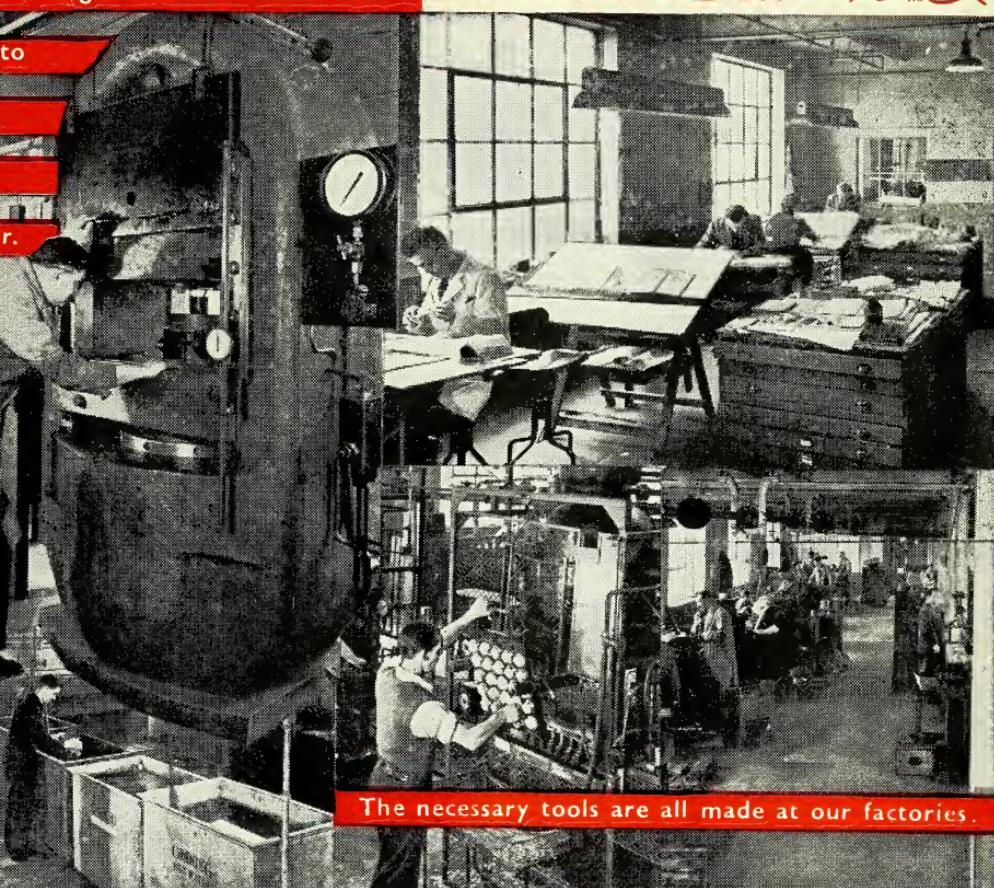
can supply moulded
s to special designs or
ock moulds in opaque
slucent colours. The
te co-operation be-
our Bottle and Cap
s ensures efficient
of your product."

UNITED GLASS BOTTLE MANUFACTURERS LTD.

8 LEICESTER STREET, W.C.2

RRARD 8611 (18 Lines)

Grams : UNGLABOMAN, LESQUARE, LONDON



The necessary tools are all made at our factories.

U G B
BOTTLES
AND
CLOSURES
The Perfect Pair

the best liner for your product and

after the closures are moulded they

are individually inspected.



(THE NEW
"POPULAR"
ROLL FILM
is only
obtainable
DIRECT
and
NOT
from
WHOLESALEERS)

ALL POPULAR SIZES
EIGHT EXPOSURES
STANDARD PRICE

Size	Wholesale Price	Purchase Tax	Retail Price
27	14/4 doz.	9/1 doz.	2/5 each
20	17/- ..	10/10 ..	2/9 ..
62	17/- ..	10/10 ..	2/9 ..
29	14/4 ..	9/1 ..	2/5 ..
16	21/9 ..	13/9 ..	3/8 ..
S16	21/9 ..	13/9 ..	3/8 ..

Remember you deduct 5% for Cash with Order from Wholesale Price
(not from Purchase Tax)

NOTE NEW ADDRESS

PANDA FILM CO.

75 AVONDALE ROAD, BROMLEY, KENT.

TEL RAY 6528

PANDA FILMS

Still offer as Special Features:

1. 5% Special Bonus Discount (Cash with Order).
2. Available in "Popular" (Ortho) and "Speed" (Pan).
3. Free advertising matter, Display Stands and Price Cards.
4. Special Terms to Wholesalers and Photo Finishers. ("Speed" only).
5. Special Sample Parcel of both "Popular" and "Speed" films for £8 10 6 (Inc. Tax) shews clear profit of £2.
6. Attractive carton sells on sight.



THE PUBLIC WANT **ZEMS**

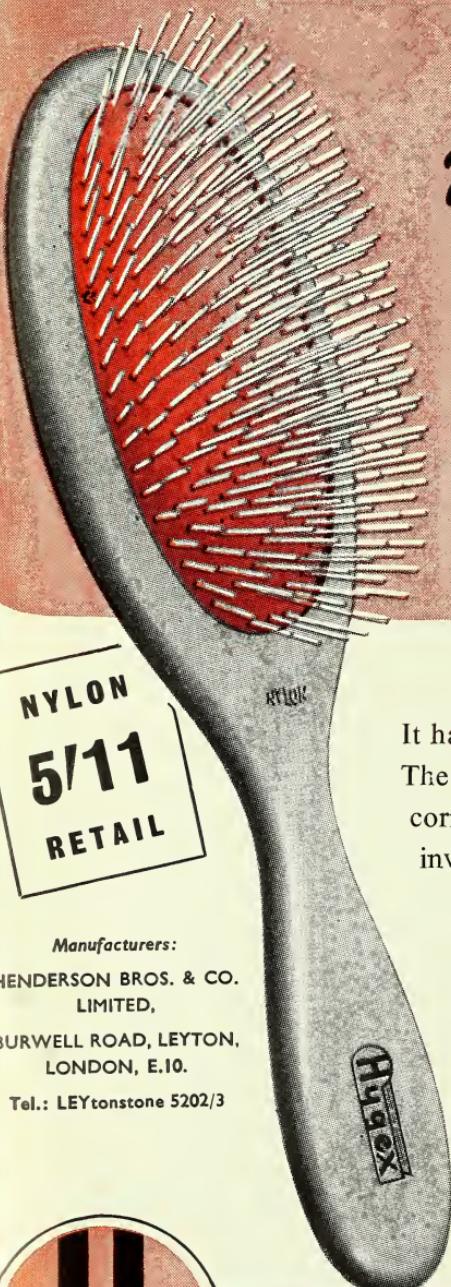
P.A.T.A

Order now from your wholesaler
or direct from—

GLADSTONE LABORATORIES

718/24 SEVEN SISTERS ROAD,
TOTTENHAM, N.15





*Now - a
new brush
to bring in
more business!*

It has been described as "**A REAL WINNER!**"
The flexible single NYLON strands are non-corrosive and are most refreshing and invigorating to the scalp.

The **HYGEX "333"** is selling fast.

Supplied in rosewood, satinwood, pink, pastel blue and green finishes in the distinctive Hygex display carton.

Price 39/- per doz. plus P.T.

Order NOW through your usual wholesaler.

**A GOOD BRUSH PEOPLE
CAN WELL AFFORD**

Hugex

BRANNAN

FOR ALL TYPES OF

THERMOMETERS



MADE IN BRITAIN'S MOST MODERN
THERMOMETER FACTORY

At Cleator Moor, West Cumberland

**CLINICAL, LABORATORY, HOUSEHOLD,
MERCURY-IN-STEEL**

OUR EXPERIENCE-YOUR SAFEGUARD



S·BRANNAN&SONS·LTD

46·LONDON ROAD·FOREST HILL·LONDON·SE23·FOREST HILL 3414
AND CUMBERLAND THERMOMETER WORKS·CLEATOR MOOR·WEST CUMBERLAND

P. LEINER & SONS LTD.

MAKERS OF GELATINE FOR OVER A CENTURY

EDIBLE GELATINE

FULLY GUARANTEED TO COMPLY WITH REQUIREMENTS OF FOOD & DRUGS ACT

REGISTERED

TRADE MARK



**MANUFACTURERS OF
WATER-CLEAR OSSEIN GELATINE & SKIN GELATINE**

Kibbled, Sheet and Powder, for all purposes

**OUR FACTORY, SITUATED AT TREFOREST, GLAMORGAN
IS BY FAR THE LARGEST AND MOST MODERN
IN THE WORLD**

P. LEINER & SONS LTD

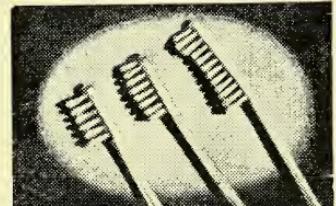
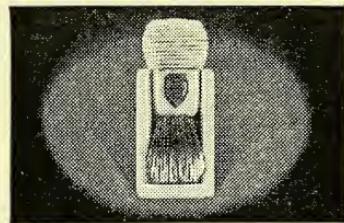
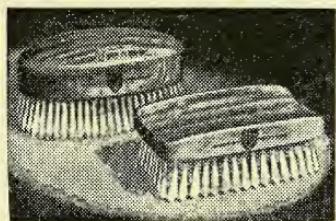
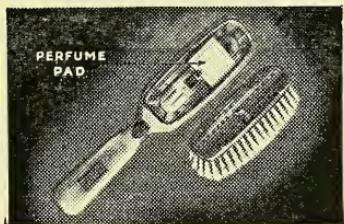
7-9 CREECHURCH LANE, LONDON, E.C.3

Phone: AVENUE 2276-2277

Telegrams: GELABLE, ALD, LONDON



By Appointment
Brushmakers
G. B. KENT & SONS, LTD.



KENT OF LONDON

Best British Brushes

Kent Quality Brushes were first created by Messrs. G. B. Kent & Sons, Ltd., London, England, in 1777. The finest grades of Kent Brushes are made with bristles of genuine Siberian boar and backs of the finest selected Satinwood. Brushes of this character are entirely hand-made, and are the proud achievement of skilled workmen, many of whom have handed down their craftsmanship from father to son, from generation to generation. They are without equal for quality and conscientious workmanship, and have been the chosen brushes of the Royalty of Europe and the cultured public throughout the world for many generations.



G. B. KENT & SONS, LTD., 24 OLD BOND STREET, LONDON, W.1
Tel.: REG.: 1471-2-3.

CABLES : TRICO PICCY LONDON

★Country-wide advertising for P 5 brings National Demand!

SELF-ADJUSTING—One size fits all hair styles.
IT HOLDS THE CURLS: the Elastic Panels keep them firmly in place.

NYLON FOR HARD WEAR: the P 5 outlasts many ordinary Hairnets. It is beautifully soft and can be WASHED REPEATEDLY.

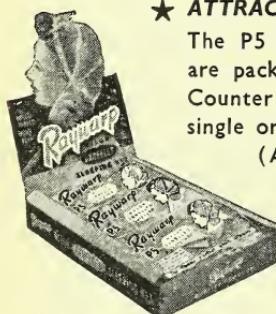
★ ATTRACTIVE DISPLAY

The P 5 in transparent envelopes, are packed one dozen in striking Counter Display Boxes in either single or assorted shades.

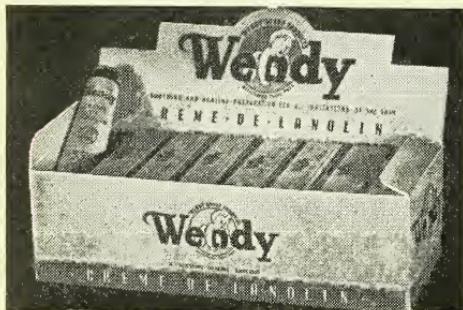
(Apple, Peach, Sky.)

Price to retail trade
25/- per unit, plus tax

Price to public of P 5,
3/11 including tax.



RAYWARP TEXTILES LTD. ALFRED ST. NORTH, NOTTINGHAM



Wendy Brand CREME de LANOLIN

Created to meet the demand for a smooth, easily applied Creamed Lanolin. Is available in handy Cartoned Tubes and attractive 2-dozen display outers.

The tube has now been increased in size, the retail price remains the same.

Retail Selling Price
1/4½ inc. tax.



Obtainable from your wholesaler.

If any difficulty write direct to the Manufacturers
COLLEGE LABORATORIES LTD.
The Tower, Warmley, Bristol

London and Home Counties Distributors
H. B. DORLING LTD.
18 Churston Avenue, Upton Manor, London, E.13
Telephone: Grangewood 2324

TWO-WAY STRETCH

Lastonet

SURGICAL STOCKING

with NYLON
Mixture Foot

Lastonet, the renowned made-to-measure Surgical Stocking is now available with a Nylon Mixture Foot, giving greatly increased wear.

Measurement forms and full details from the makers—

LASTONET PRODUCTS LTD.
Carn Brea, Redruth
Cornwall

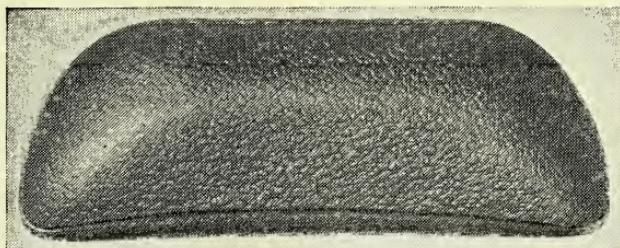


Now supplied with Nylon Mixture Foot

Lastonet for inconspicuous support

THE "FORSETTA" METAL SPECTACLE CASESSuper Spring
LidCompletely
DUSTPROOFPrompt
Delivery

Carriage Paid

Size 21
Hockey EndOnly Best
Quality
"Rexine" usedBest Value
Obtainable

In the following colours: Cambridge, Oxford and Marina Blue, Black Blue, Red and Black Linen, Lizard Brown, Cherry Red, Red, etc.

Price 12/- doz. plus 8/- doz. Purchase Tax. Special price for quantities.

**WE HAVE SECURED THE AVAILABLE STOCK IN THIS COUNTRY OF
AMERICAN MANUFACTURED LENSES**
VERY SPECIAL OFFER

Best quality Toric Lenses 40 M/M Bevel-Edged (Round). Full range in Spheres from Plano to 6.00 and in Cyls from 0.25 to 2.00 plus and plus, and minus and minus. All by best U.S.A. Manufacturers :— Bausch & Lomb ; E. B. Meyrowitz (Inc.) ; Shuron Optical Co. (Inc.) ; American Optical Co. ; Renaud Optical Co. (Inc.), etc.

PROMPT DELIVERY. ORDER NOW WHILST WE HAVE THEM.

Also a limited number in 0.25 to 9.00 plus meniscus.

**SEND US YOUR ENQUIRIES FOR QUICK DELIVERY OF
UNCUT LENSES FIRST QUALITY**

In : TORICS, MENISCUS, FLATS and FLATS SPH/CYLS
All sights in first, second and third ranges.

SPECTACLE FRAMES at Special Price whilst they last !

We have purchased the whole stock of Valley Industries Ltd.

Contour Eye, Screw Joint, Reinforced-side Spectacle Frames in Brown Mottle, Flesh, Autumn Leaf, Demi-Blonde and some Black — Assorted Sizes.

514	...	...	...	58/6 per doz. pairs nett
524	...	...	...	63/- " " " "

SIR JOHN PRATT & CO

(Proprietor : Sir John Pratt, J.P.)

Manufacturing Opticians

89 FORSETT COURT, EDGWARE ROAD, LONDON, W.2

Telephone: PADdington 4104

THERE IS AN EVER WIDENING DEMAND

for
Luxan and
Luxol
Sanitary
Towels

Personal recommendation is the keynote of this success. Women everywhere appreciate the attractive make-up and reasonable price.

WIDELY ADVERTISED IN THE PUBLIC PRESS
SHOWCARDS AVAILABLE

Luxan Ltd

4 CHEPSTOW STREET · MANCHESTER 1.

HERE'S A **CORN**
REMEDY YOU CAN'T BEAT
Hobson's Choice removes Corns in 3 to 7 days,
it is safe, sure and painless. Backed up by
widespread advertising it has become the
leading CORN CURE on the market to-day.

100 Hobson's Choice 99
FEET PLASTERS POWDERS

Retail Prices:

Plasters - - 2½d.

Powders - - 1½d.

Combination Pack - 9d.



**HOBSON TRIMBLE & CO., LTD.,
UNION HOUSE, LEEDS, 2**



The Gnome Pixie-Flet.

- * Twin lens reflex Camera, all metal construction
- * Twelve exposures 24 sp (6 sec) on 620 or 120 film
- * Press button shutter release
- * Instantaneous and Bulb shutter speeds
- * Ever-Ready Cases available

Price £4-8-0 Tax Paid

For full details ask your dealer or write direct to
manufacturers 354, CAERPHILLY ROAD, CARDIFF.

F. SCHUTZE & Co., LTD.

ESTABLISHED 1882

For "MASTER" BRAND SURGICAL TRUSSES
SUSPENSORY BANDAGES
JOCK STRAPS, etc., etc.

PERFUMERY BOTTLE WICKERERS in RAFFIA
or SILK, plain or fancy, wide range of designs.
Own bottles wickered at moderate cost

Black Bull Works, Market Road
London, N.7

RECOMMENDED FOR NERVES

DR. NIBLETT'S

for
70 YEARS

**VITAL RENEWER
NERVE SEDATIVE**

Retail price
6/-
per bottle
including
purchase tax.

TRADE DISCOUNT 33½%

C. P. NIBLETT (Est. 1870)

10 LICHFIELD TERRACE, RICHMOND, SURREY

Telephone: RICHMOND 3221

Stops Scurf

Page-Barker's

Scurf & Dandruff Lotion

Trade 20/- doz.

Money Back

Plus Tax $\frac{1}{2}$ Retail 3/4

Guarantee

Ask for Showcard

on every bottle!

Sole Distributors to the Chemists' Trade—

THOS. CHRISTY & CO. LTD. FARNHAM, SURREY

Sole Manufacturers and Proprietors:—

THE ILEX SUPPLY CO. LTD., 252b, GRAY'S INN ROAD, LONDON. W.C.I



SOL-TAN

... switch on
to sunshine!

A PURE QUARTZ BURNER of clinical standard is employed, together with Radiant Heat and Infra-Red Generators of proved design. The "Triple Ray" is rich in all the most essential of the rays used in the application of modern physical medicine. Only the best materials are used in its construction and workmanship is of the highest order.

Finished in cream enamel and chromium, the model is supplied complete with fused adaptor and flexible, together with one pair of adults' and one pair of children's eye-shields, and full instructions for use.

Sold only against doctors' certificates or for professional use.

Our new Fully Illustrated Catalogue gladly sent on request.

"Sol-Tan" Marketed for Home and Export by



Cat. No. EM100/23 TM
The Sol-Tan Tripleray Artificial
Sun Lamp £17.17.6 Tax Free.

THE LONDON COMMERCIAL ELECTRICAL STORES LTD.
20-23 CURSITOR STREET, E.C.4. • CHANCERY 6488 / 9

L643/B.S.

WHEN YOUR

CUSTOMERS ASK

FOR

TIMBER FLUID

THEY MEAN

RENTOKIL
NATIONALLY ADVERTISED

Packed in attractive
Display Cartons —
each carton containing
8 oz. bottle of
Rentokil Timber
Fluid and injector
for forcing the fluid
into the worm
holes.



Woodworms are more active than ever this year so please hold adequate stocks to meet the increasing demand for RENTOKIL TIMBER FLUID, the tried and proved woodworm destroyer.

GENEROUS TRADE TERMS
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RENTOKIL LTD.

Dept. C.D. School Lane,
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Reliability in
RUBBER

BABY PANTS

COT SHEETS

DRESS SHIELD INSERTS

The very high standard of quality that is associated with all LEARUBBER products has given them a reputation for dependability that is second to none.

- We shall be pleased to receive enquiries for these and other articles in our wide range of domestic, beach and sports goods.



LEA BRIDGE RUBBER WORKS LTD., London, England

Why is the

"ACME"

**VACUUM
FLASK**

the most popular?

Because—

1. It has a distinguished style of its own.
2. It keeps liquids hot for 24 hours, and cold for 72 hours.
3. It is guaranteed to be individually tested for 24 hours.
4. And is altogether most reliable.

Fitted with Large Plastic Cup, with grip ridges Quart size will be available shortly.

The Latest addition to the Acme Range . . .

**JUG
SETS . . .**

Jug, Beaker
and Tray

Retail
13/6

Jug only
10/II



Retail

4/II



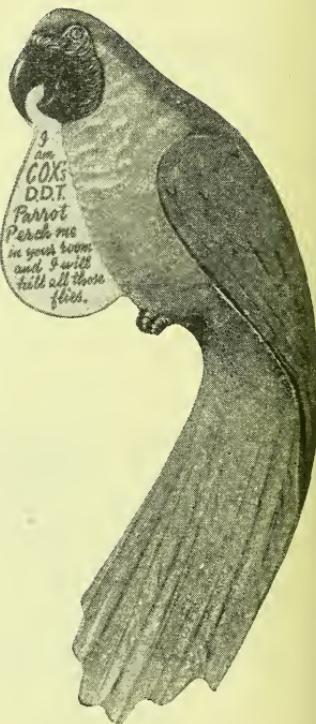
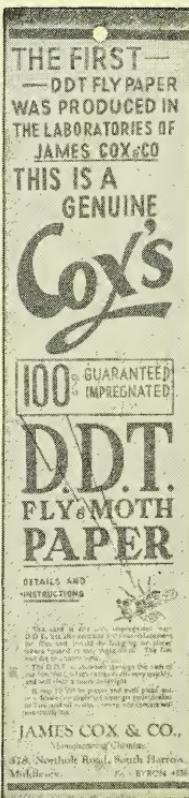
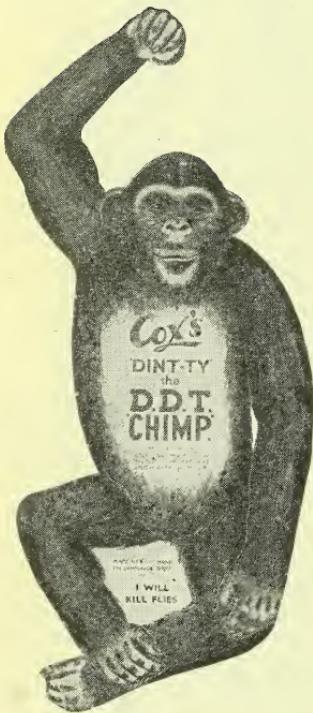
British made throughout in finest plastic, polished metal handle, entirely rustless construction. Wide non-tip base. 1 pt. size. Special device ensuring absolutely firm hold of glass turning. Model No. 5.

**ACME VACUUM FLASK CO.
PHOENIX WORKS, BRIDGEND, GLAM.**

COX'S D.D.T. CARDS

ARTISTIC EFFECTIVE THE BEST

THEY DO KILL FLIES



COX'S D.D.T. CHIMP

RETAIL 3^d EACH

WHOLESALE 24/- PER GROSS

Generous terms to Wholesalers, Factors, etc., upon application

ALL ACCOUNTS LESS 2½% — 30 DAYS

OVER 12,000 PHARMACISTS STOCK COX'S D.D.T. CARDS

Because they are guaranteed 100% impregnated and have a TWO YEAR-LIFE . . . Not merely surface coated

Obtainable from all leading Wholesalers, or direct from

James Cox & Co.

D.D.T. WORKS, NORTHOLT ROAD, SOUTH HARROW, MIDDX

Telephone : BYRon 4326

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WHOLESALE 32/- PER GROSS

RELIABLE HOUSE**IMPORTS**

Pharmaceutical Chemicals
Foreign Herbs and Drugs
Essential Oils
Spices
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Sandal Wood Chips
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ETC.

AMINOPHYLLINE

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CITRATES

PARA AMINOBENZOIC ACID

SULPHAGUANIDINE

ETC.

A FULL RANGE OF COMPRESSED TABLETS
ALSO AVAILABLE



AMBER PHARMACEUTICALS LTD.

MANUFACTURERS OF FINE CHEMICALS AND PHARMACEUTICAL PRODUCTS
BYRON HOUSE, 7-9 ST. JAMES' STREET
LONDON, S.W.1.



TRADE 'BARBURAL' MARK

The New Hypnotic-Sedative

'BARBURAL'

Each Tablet contains Cyclobarbitalone Calcium - gr. 1.
Bromvaletone B.P.C. - gr. 4.

'BARBURAL'

has the advantage of a very small Barbiturate dose

'BARBURAL'

is indicated as a sedative and hypnotic in insomnia and
nervous conditions

'BARBURAL'

is a safe rapidly acting hypnotic with prolonged
sedative effect

'BARBURAL'

is issued in tins of 100 and 500 tablets

Amber Pharmaceuticals Limited

Manufacturers of Fine Chemicals and Pharmaceutical Products

BYRON HOUSE, 7-9, ST. JAMES STREET, LONDON, S.W.1.

For every contraceptive need

Rendells

PRODUCTS



RENDELLS PESSARIES

The original chemical contraceptive made famous during the past sixty years in all parts of the World. Generally considered the safest and most convenient of all methods.

RENDELL GELS

Containing similar active principles, but made with gelatine base, non-greasy and odourless, for those who prefer this type of contraceptive.

RENDELL-FOAM

The result of over two years' clinical and biological research has shown this product to be remarkably permacidal, yet continued use is harmless to either sex. Instantaneous in action, free from all objectionable odour, non-greasy.

RENDELL-CREAM

A highly spermacidal cream which is recommended as a lubricant or for use with occlusive caps.

For more than sixty years Rendells have devoted their activities to Birth Control requirements, and to-day their experience based on clinical and laboratory research is unequalled.

All Rendells contraceptives conform to the high standard of efficacy demanded by the Family Planning Association and are fully approved by the Medical profession.

Firm Favourites!

with every member of the family

CUTICURA PREPARATIONS

(MEDICINAL AND TOILET)

SOAP . OINTMENT

TALCUM POWDER . SHAVING STICK

These grand aids for skin-care have been giving confidence and satisfaction for over 65 years. Profits are good — Advertising consistent and widespread. Sales-promoting window displays always at your service.

The following attractive products, each with a universal appeal, will shortly be added to the popular Cuticura Range :

HAND CREAM . BABY OIL

SHAVING CREAM . LIQUID ANTISEPTIC

AFTER-SHAVE LOTION

British Distributors: **NEWBERY & PHILLIPS LTD.**

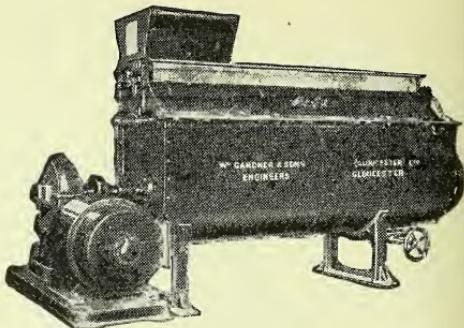
203, Victoria House, Southampton Row, London, W.C.1
TELEPHONE: HOLBORN 1564

for
THE POTTER DRUG & CHEMICAL CORPORATION
205-207, Victoria House, London, W.C.1

WHEN IT'S
SIFTING
& MIXING
THEN IT'S
GARDNERS

These machines fully deserve their world-wide reputation for consistently producing accurate mixes and blends of fine powders in less time and with low power costs. Their exceptionally long lifetimes are borne out by the many machines that have been operating over fifty years, with little attention and free from breakdowns.

Gardner's knowledge and experience of nearly a century is at your disposal for designing special machines for the industry. Please write for catalogue of standard Sifters, Mixers, Sifter/Mixers, Dressers, etc., or state your requirements.



of Gloucester

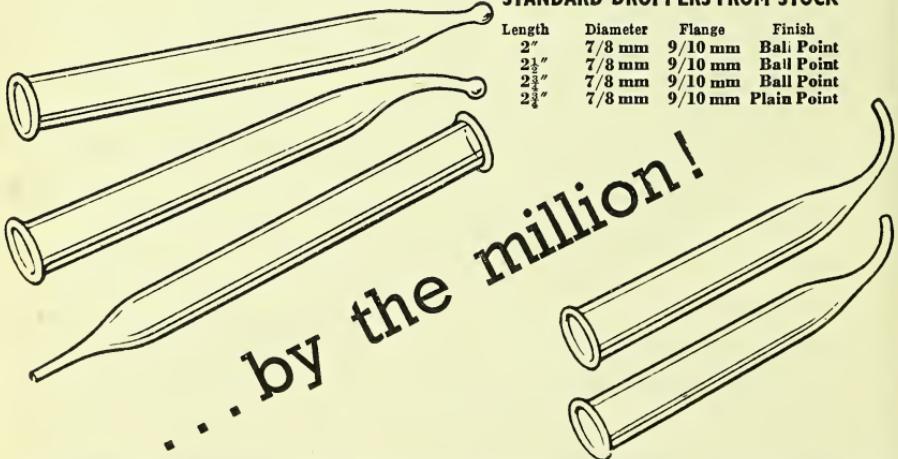
Wm. Gardner & Sons (Glos.) Ltd.
 Bristol Road, Gloucester
 Telephone : 21261
 Telegrams : "Gardner, Gloucester".

LONDON :
 19 Grays Inn Chambers, 20 High Holborn, W.C.1
 Telephone : CHAncery 7347

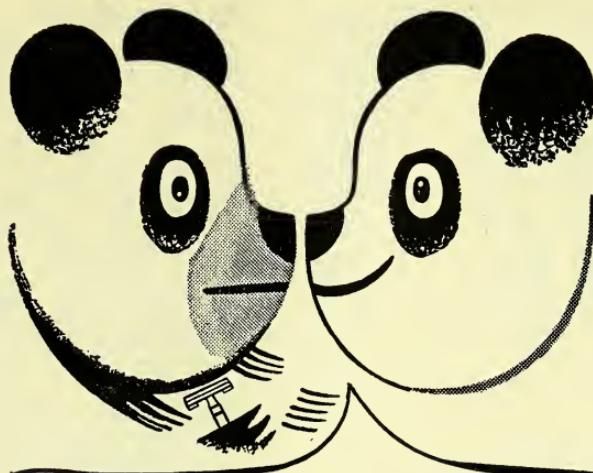
machine made DROPPERS

STANDARD DROPPERS FROM STOCK

Length	Diameter	Flange	Finish
2"	7/8 mm	9/10 mm	Ball Point
2½"	7/8 mm	9/10 mm	Ball Point
2¾"	7/8 mm	9/10 mm	Ball Point
2½"	7/8 mm	9/10 mm	Plain Point



F. COPLEY & CO. BEESTON, NOTTS.



We'll help you sell Blue Gillette Blades

The Gillette animals are going all out on their job of helping you sell more Blue Gillette Blades. In the coming months heavy advertising will put their cheerful message before all men who have whiskers to keep down. Everyone who comes into your shop will have "Good mornings begin with Gillette" somewhere in his mind. Remember it's display that turns a memory into a sale so be ready with enough stock, and show Gillette.



As from 1st June, 1950, retail prices are:—

**BLUE GILLETTE
AND VALET BLADES**

10 for 2/8d.
5 for 1/4d.
2 for 6½d.

THIN GILLETTE BLADES 7 O'CLOCK BLADES

12 for 2/3d.
6 for 1/1½d.
2 for 4½d.

10 for 1/6d.
5 for 9d.
2d. each

All prices include Purchase Tax

Trade enquiries to your usual wholesaler or direct to Gillette Industries Ltd., Isleworth, Middlesex.

If

you agree

that the pack

makes the product,

you should let

Petrushkin

make the

pack

M. PETRUSHKIN LIMITED. Established 1894
Cardboard Box Manufacturers and Printers.
183 BOW ROAD, LONDON, E.3 • Advance 3131-2



...but make sure it's a VEXTERM RAT BISCUIT, not harmful to pets, human beings or farmyard stock, when used as directed, but death to rats and mice. Clean, safe and easy to handle. From Chemists, Ironmongers and Stores everywhere. Price 1/-6&5/9

VEXTERM

READY-BAITED
RAT BISCUITS

Agriculture and Fisheries Licence No. 10184

Manufactured by
BRITISH RODENT EXTERMINATOR CO. LTD.
PRATTS BOTTOM • FARNBOROUGH • KENT
Phone: FARNBOROUGH 849

HARVEY'S
Horse Remedies

P.A.T.A. Protected Prices

Supplies can be obtained through all Wholesale Houses

HARVEY & CO. (DUBLIN) LTD., DUBLIN

ASPIRINS

HOME AND EXPORT

7½ & 5 grain Packed 10's to 1,000's

• **HARRINGTONS** •

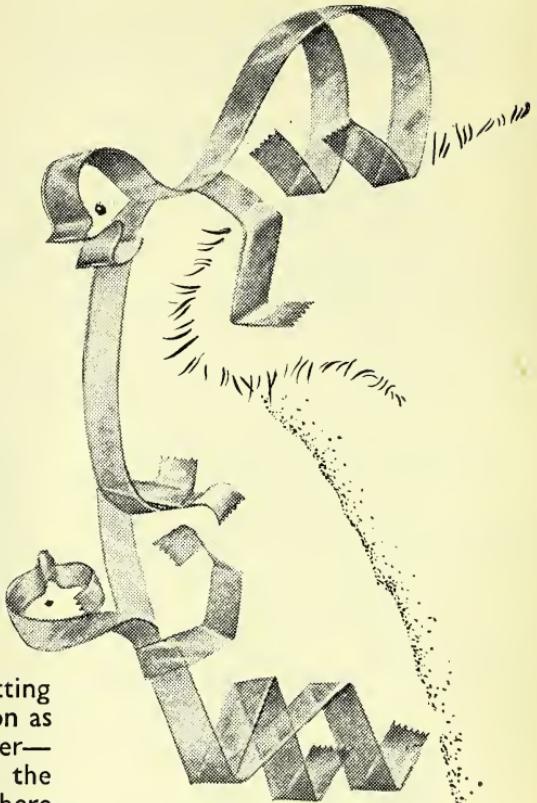
London Office: 2 BERRIDGE Grn., EDGWARE, LONDON



FIR ST., WORKS
Heywood, Nr. Manchester

Sellotape Holds

You won't find Sellotape letting you down ! It sticks fast as soon as it touches, without gum or water—quickly, cleanly, easily—it's the most reliable packing medium there is. Use Sellotape for your 'Over the counter' packages—it's so much quicker than string, just as strong and looks so much better, too ! Bottle labels stay clean and legible when protected with Sellotape.



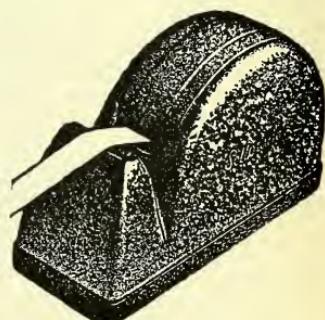
Sellotape is also available in handy dispensers for resale to the public. Backed by National Advertising and striking display material, they really sell ! So make sure your stocks are adequate. Write or phone for full details, now !

SELLOTAPE

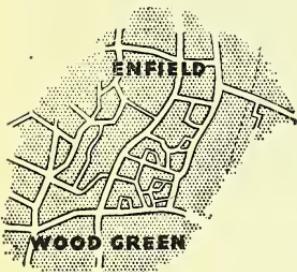
SELF-ADHESIVE CELLULOSE TAPE

The word "BONDED" used in connection with adhesive tape implies that the adhesive is firmly keyed to the tape. This has, of course, long been a feature of SELLOTAPE

GORDON & GOTCH LTD.
4 GORDON HOUSE
FARRINGDON STREET
LONDON, E.C.4
Telephone : CENtral 5211



★ Owing to pressure of business . . .



We're moving to
ENFIELD

... to more spacious premises . . . to enable us to meet your increasing demands for the ALBRO range of Vacuum-operated Filling Machines for liquids and powders; Stopper and Lidding Machines; Conveyor Packing Tables, etc.

In the near future, our new address will be:—

★ WHARF ROAD, PONDERS END
ENFIELD · MIDDLESEX

ALBRO FILLING MACHINES

ALBRO FILLERS & ENGINEERING CO. LTD
Northampton Works, Watsons Road
Wood Green, London, N.22
Telephone: Bowes Park 2217/8

THE **FLUID** AGITATOR-EMULSIFIER LABORATORY MODEL SL-A

All Stainless Steel

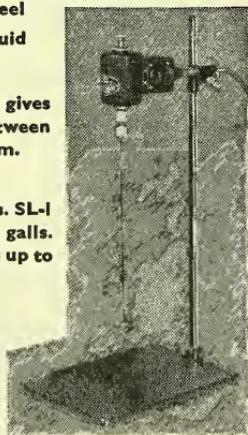
Contact with Fluid

•

Built-in Control gives speed variation between 20 and 2000 r.p.m.

•

Also larger models. SL-I for vessels up to 5 gallons. and S.C. for vessels up to 500 gallons.



IMMEDIATE
DELIVERY

FLUID EQUIPMENT CO. LTD.
(Dept. S.D.) 83 Seafield Road, London, N.11
Phone: ENT 2565

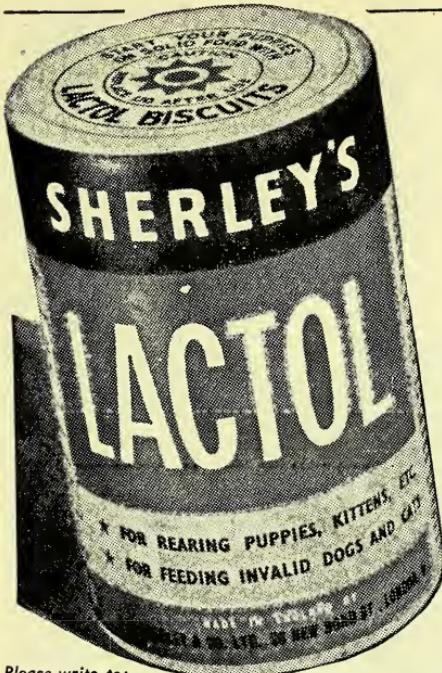
Mould Manufacturer FOR ALL COSMETIC AND PHARMACEUTICAL PURPOSES LARGE or SMALL

HIGH PRECISION WORK

- MANY STANDARD SIZES IN STOCK
- INQUIRIES INVITED for SPECIAL MODELS

MODERN LIPSTICKS GREASE PAINTS
EYEBROW PENCILS AND OTHER
SOLID COSMETICS AND
PERFUMES
PESSARIES, SUPPOSITORIES, BOUGIES, etc.

KENWAY (MOTORS) LTD.
ENGINEERS
12 BUTE ST., LONDON, S.W.7
Phone: KENSINGTON 1311



SALES are CERTAIN!

—SO KEEP UP YOUR STOCKS OF
SHERLEY'S LACTOL

The public have been told that dealers hold **limited** supplies of LACTOL. We shall do our best to meet all enquiries from the Trade—but ask you to take a forward view, as far as possible, respecting your requirements. Where there are stocks, sales are certain—so keep up your stocks.

SHERLEY'S LACTOL

is in two sizes

retailing at 3/6 and 12/6

Please write to:

A. F. SHERLEY & CO. LTD., 16-18 MARSHALSEA ROAD, LONDON, S.E.1.

HORMONES
DI-METHIONINE
PARA AMINO SALICYLIC ACID
and its **SODIUM SALT**
PENICILLIN
ANTI HISTAMINICS
STREPTOMYCIN
VITAMINS

ENQUIRIES INVITED

AMERICAN ROLAND CORPORATION

16 HUDSON STREET, NEW YORK 13, U.S.A.

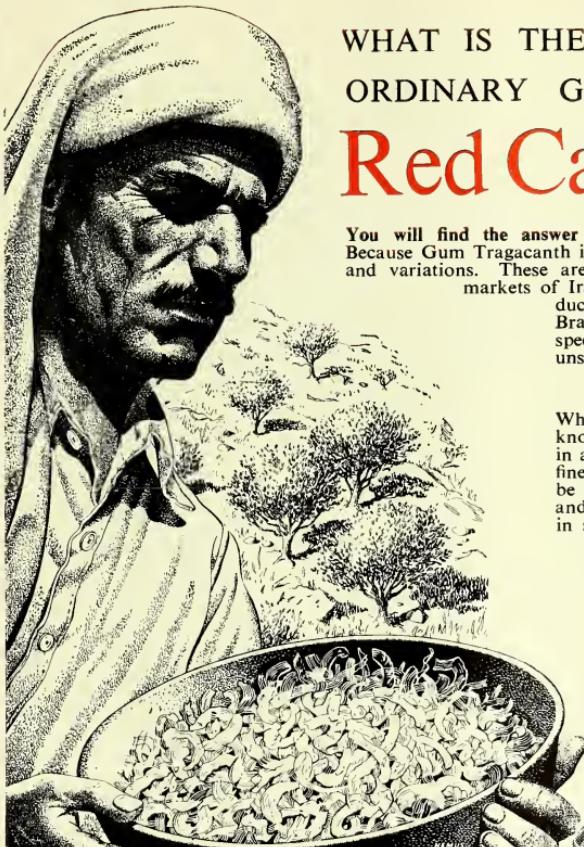
CABLES: BIOROLAND, NEW YORK

The demand for Silvikrin lotion with Oil



An excellent product—a big new market—straightforward, compelling and consistent advertising. These are the factors which have built Silvikrin Lotion with Oil into a big seller in record time. Reap the full benefit of this new business by making a special display of Silvikrin Lotion with Oil NOW. The well-known red pack makes a striking eye-catcher and increased demand is sure to follow.

Silvikrin Lotion with Oil

A QUESTION OF QUALITY

WHAT IS THE DIFFERENCE BETWEEN
ORDINARY GUM TRAGACANTH AND

Red Carnation BRAND[®]

You will find the answer in the quality of the goods you manufacture. Because Gum Tragacanth is a natural product, it has natural imperfection and variations. These are still present in the Gum when it leaves the markets of Iran, Iraq and Turkey, but they will not be introduced into your product if you specify Red Carnation Brand—powdered Gum Tragacanth that has been specially processed in this country to eliminate unstable characteristics.

UNCHANGING QUALITY

Whenever you order Red Carnation Brand, you know what you will be receiving—Gum Tragacanth in a stabilised form as regards viscosity, colour and fineness of powder. You can be certain that it will be fresh because (1) it is packed in airtight tins and (2) our large turnover obviates the risk of gum in stock deteriorating through long storage.

FOUR GRADES AVAILABLE

Red Carnation Brand Gum Tragacanth has been graded into a series of four predetermined standards, so that no matter when you re-order—next month or next year—you can be certain of getting Gum Tragacanth of the right characteristics to safeguard the quality of your product.

HERE ARE THE DIFFERENT FEATURES OF Red Carnation BRAND GUM TRAGACANTH

- **GROUND** by a special process to ensure controlled tenacity.
- **TESTED** at every stage of processing.
- **GRADED** to a series of predetermined standards.
- **PACKED** in airtight tins.
- **VISCOSITY** established under expert supervision.

The literature dealing with Gum Tragacanth is not readily accessible to the average commercial user. On request, you can obtain a free 12 pp. illustrated booklet telling *The Story of Gum Tragacanth*.

We are Britain's largest suppliers of Gum Tragacanth, we have a Research and Advisory Department which we shall be happy to place at your disposal to advise you as to the grade of Red Carnation Brand Gum Tragacanth most suitable to your purpose.



KIMPTON BROTHERS LTD.

Established 1882

110 FENCHURCH ST., LONDON, E.C.3 Telephone : ROYal 5544 (5 lines)

'ave you heard—



**AND A TUBE OF
ESTOLAN...**

If you haven't already heard this request, you will—soon! Women not only know Estolan Hair Conditioning Cream. They've used it, for years, in their hairdressers' recommendation. Now they're buying it in tubes for home use too. And what more natural than to buy it where they buy most toilet and beauty preparations—their chemists? Many leading chemists already stock and sell Estolan in tubes. It's proved a line worth stocking.

***the demand is increasing
at chemists' shops for***

ESTOLAN

HAIR CONDITIONING

REG.

CREAM
in tubes



Retailing at 2/6 per tube, price 12/- per dozen, plus 100% tax, each dozen packed in an attractive display outer. Order your supplies through your usual wholesaler. Display material is available. Wholesalers' inquiries to the manufacturers

OSBORNE, GARRETT & CO. LTD.
51-55 FRITH STREET, LONDON, W.1



Surgical Chiropody

Most of the training necessary to qualify for a Diploma in Chiropody can now be taken at home by specialised correspondence lessons. Fullest particulars of how to enter this highly paid profession from

**SCHOOL OF
SURGICAL CHIROPODY**

(Dept. CDI.)

**LEATHERHEAD
SURREY**



Announcing

MODIFIED LACIDAC

for **ARTIFICIAL FEEDING
UNDERWEIGHT AND
MARASMIC INFANTS
PREMATURE FEEDING**

MODIFIED LACIDAC is a dried milk powder to which lactic acid has been added and which is further modified by the addition of the carbohydrates dextrin, dextrose and cane sugar.

MODIFIED LACIDAC is made in two strengths, Half Cream No. 1 (Calorie value 20 per oz.) and Full Cream No. 2 (Calorie

value 24 per oz.) MODIFIED LACIDAC is a most satisfactory balanced feed for infants and is particularly valuable for underweight and marasmic babies, for premature infants and for those recovering from gastro-enteritis. Further information concerning this product will be supplied on request.

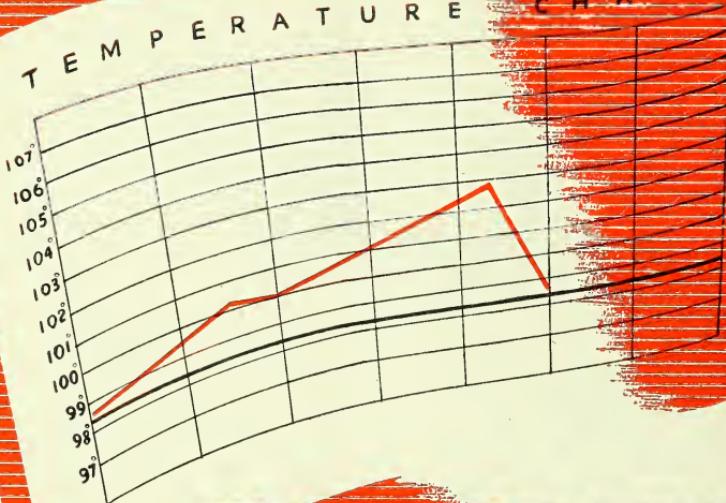
COW & GATE MILK FOODS

COW & GATE LTD.

GUILDFORD, SURREY



S H E D * 1 8 9 2
TEMPERATURE CHART



JARVIE for QUININE

H. JARVIE & CO LTD

SCOTIA CHEMICAL WORKS · COATBRIDGE · SCOTLAND

Export Enquiries to H. Jarvie & Co., Ltd. Wigmore House 10 Duke St. London, W.I

FOR RHEUMATISM, GOUT, SCIATICA, ETC.

**CURICONES****P.A.T.A.***The trusted remedy that has stood the test of time***STANDARD PACKS****5/6 and 26/5**

including purchase tax

**HAVE YOU ORDERED THE NEW
"DISPENSING ONLY" PACK
WHICH IS NOW AVAILABLE?**These contain 500 CAPSULES and are
free of purchase tax**Price 28/2****NEW BOOKLET
FOR RHEUMATIC SUFFERERS**

This is an authoritative treatise on Rheumatic complaints written in language that the layman can easily understand. Copies are now being included in both the 5/6 and 26/5 size Curicones Cartons, and supplies are also available to chemists FREE on request.

Mention is being made of this booklet in our National Advertising and readers are invited to ask their chemist for a copy. Make sure you have a supply of these booklets on hand.

**5 OTHER PRODUCTS
WITH A FINE REPUTATION**

ARTHROIDS-BALM—non-irritating preparation for outward application in cases of muscular strain and Rheumatic pains. Retail price 2/9 per tube including tax.

CURILAX—a safe, non-habit-forming laxative in capsules that is completely effective yet absolutely harmless to the system. Ideal for children. Retail price 1/4 inc. tax.

VICAPS—Tonic Capsules—extremely valuable in cases of nervous depression, exhaustion, sleeplessness, debility, etc. Easily swallowed because of gelatine casing. Retail price 3/3 and 16/10 inc. tax.

SANALVE—Ointment for cuts, burns, insect bites, acne and other skin troubles. Antiseptic and healing. Sold in handy tubes at 2/9 retail, inc. tax.

STE-MAT—Nasal Ba'm, a germicidal and soothing preparation for relieving Catarhal affections. In collapsible tubes with nasal applicator, retail price 3/3, inc. tax.

★ All the above preparations are subject to the full trade terms of 33½% and are C.F. and P.A.T.A. Lines.

**WEATHER-INDICATING
NOVELTY SHOWCARDS**

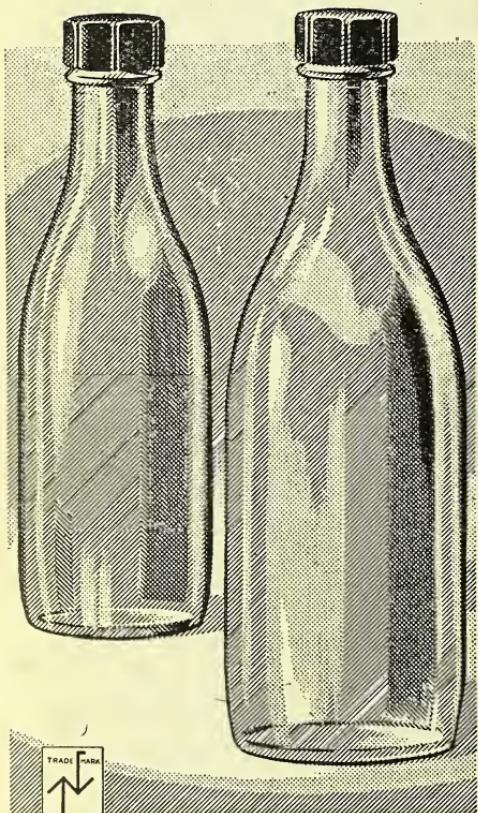
Printed in bright, attractive colours. An excellent novelty and surprisingly accurate. Send us your name and address to obtain one.

**STEPHEN MATTHEWS
& CO., LTD.****19-21 FARRINGDON STREET
LONDON, E.C.4**

BEATSON

BAKELITE CAPPED
CHAMPAGNE OILS

These bottles greatly enhance the presentation of packed oils. They are available in 2½ oz., 5 oz., 10 oz. and 20 oz., capacities.



BEATSON CLARK & CO. LTD.

ESTABLISHED 1751

Manufacturers of Medical and Chemical Glass

ROOTHERHAM

YORKS.



BC 71

SMITHS HYLOTHERMS

SATISFY
THE WIDE
DEMAND
FOR

C.T.R.*

(CHECKED TEMPERATURE RECORDING)

BY SCHOOLS, HOSPITALS, FACTORIES, WAREHOUSES,
AND BY FARMERS, POULTRY KEEPERS, etc., etc.

By recording with certainty the maximum and minimum temperatures over any period, Smiths HYLOTHERMS offer your customers a constant safeguard against damaging temperature variations. Press button makes resetting instantaneous. Strong rust and weatherproof cases. Gimbal bracket supplied for wall-fixing.

Obtainable from your usual Wholesalers.

Price: **49/6**

SMITHS ENGLISH CLOCKS LTD., LONDON, N.W.2
The Clock & Watch Division of S. Smith & Sons (England) Ltd.

STERILIZED CLEANING CLOTHS

WHITE WIPERS ..	.. @	130/- cwt.
COLOURED WIPERS ..	.. @	87/6 cwt.
WASHED MUTTON CLOTH ..	@	3/- per lb.

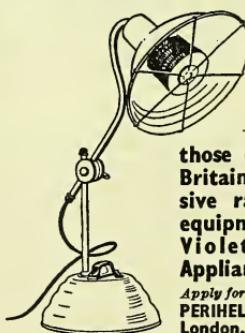
Carriage extra. Prompt dispatch.

SHEARMAN & CO. LTD., Duke St., Tavistock, Devon

Now Available

SACKERS HYGIENIC METAL COMBS

All Enquiries
SAQUERRE LTD. 62-64 BROOK STREET, LONDON, W.I



Doctors prescribe Sunlamps right through the year. All sales go through the trade but chiefly through those dealers who display Britain's most comprehensive range of ray-therapy equipment:—Perihel Ultra-Violet and Infra - Red Appliances.

Apply for Showcards and Literature to —
PERIHEL LIMITED, 17 Edge Street,
London, W.8. Phone: PARK 7870

"Most impressive..."

ONE CHEMIST SUMMED IT UP



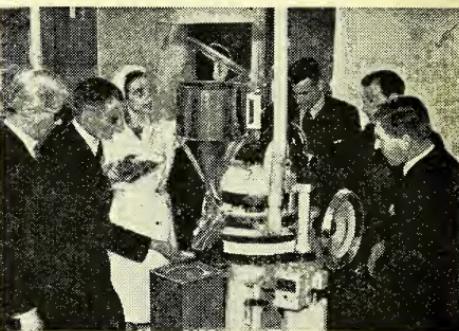
Organised groups of chemists and single visitors are equally welcome at the Bob Martin headquarters in Southport. The interest shown by a recent group of visitors was typical. Formulation, manufacture and analytical control combined to give them a most interesting overall picture.



First they had a chat with our Chief Chemist, who, taking 'Tibs' as an example, explained how the formula was evolved by biochemical and veterinary research—how 'Tibs' is a food supplement, providing the vitamins and minerals cats need regularly.



A batch of 'Tibs' had just been made, and the visitors saw how the product is tested for B vitamin potency and content of the mineral trace elements needed for correct metabolism. The fluorimeter, the absorptiometer and other instruments for analytical control were demonstrated.



From the laboratories the visitors went to the factory to see ingenious machines used for such operations as grinding, sieving, mixing and tabletting. Every minute of their stay was packed with interest and information; an insight into the formulae and function of Bob Martin products which is valuable to all concerned.

THERE'S nothing like first-hand information, and many chemists now know why the Bob Martin products are good products. We are always pleased to receive professional visitors at Southport. What they see is of interest and value to them, and to their customers. If you would like to make such a visit, we should be happy to arrange it. In the meantime, may we remind you that if you have not yet read our useful and informative Formulae Brochure, we should be glad to send you a copy on request.



Hollypax economy means extra sales

The nation-wide need to economise means that Holly-Pax will be in bigger demand than ever before. Because Holly-Pax is the best tampon value on the market . . . because more and more women who prefer modern insertion-type sanitary protection must now "count the pennies" . . . because Holly-Pax is well advertised, and attractive Display Material is available for your use . . . you're bound to benefit from bigger sales and quicker profits. Stock up now with Holly-Pax!



Modern Insertion-Type Sanitary Protection

Sole Distributors:

FASSETT & JOHNSON LIMITED,
86 CLERKENWELL ROAD, LONDON, E.C.1

RELIANCE has promoted the **SPONGE** to your counter

In packing the sponge in a manner fitting a high grade article, Cresswells have put 'Reliance' sponges in a class right by themselves—and given them a right to a place on your counter, just where they please the eye and tempt the purse of your customers!

Send for illustrated leaflet showing our full range of attractive sales-producing sponge-boxes.

CRESSWELL BROS. SPONGES

(International Sponge Importers Ltd.)

International House,
BUCK STREET,
CAMDEN TOWN, N.W.1
GULLIVER 5452-3

Grams: Sponge, Norwest, London



Softex is available in cartons containing 72 standard size rolls, or 72 cardboard packets holding approximately 250 interleaved sheets. Retail price—Rolls 1/3d., Interleaved Packets 9d., Super-Softex 1/6d.

SWAN MILL PAPER CO. LTD.

92 REGENT STREET, LONDON, W.I

Tel: REGent 0422

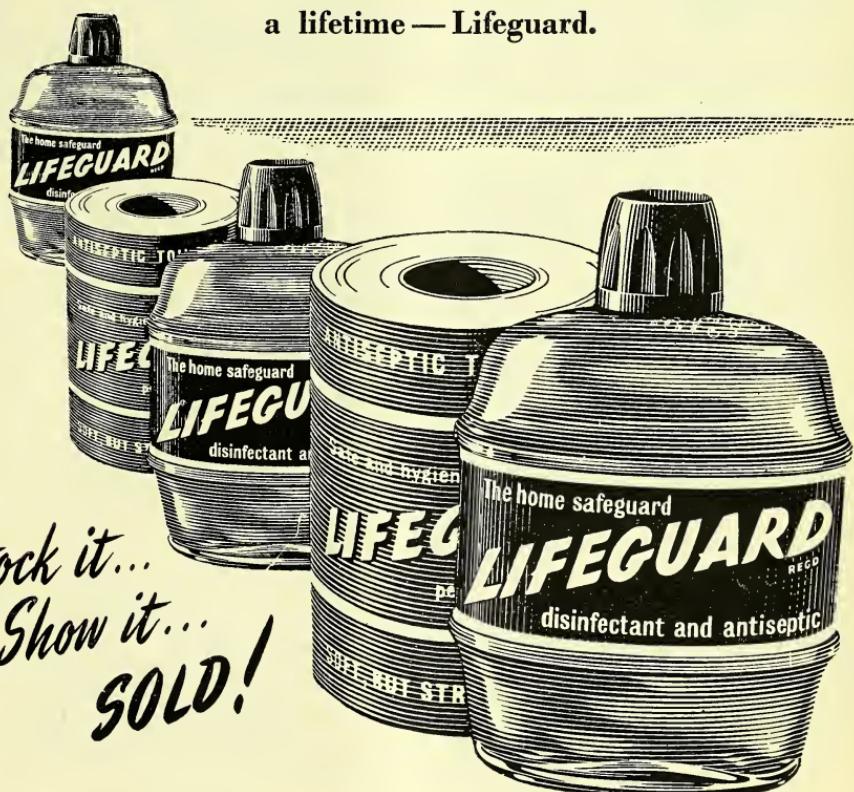
Britain's Trusted Brand

LIFEGUARD LEADS

Regd. Trade Mark

to healthier profits for YOU

It's a good line, Lifeguard, isn't it? It makes a fine show on the counter of your shop. It's making a big hit with all your customers. It's the line of a lifetime — Lifeguard.





Here's a new and novel line that every mother will want —

**Champion's KUMFI-KUT
BABY'S
NAIL SCISSORS**

National advertising is bringing a big demand for this line. Be ready to meet it, and in pleasing your customers, profit yourself.

OBtainable DIRECT
FROM MANUFACTURERS

Retail selling price
6/10d. per pair

This attractive Show Stand is supplied free with every half-dozen pairs.



Fancy Pattern, nickel-plated in
Gift Box Retail Selling Price 17/11
Or with Gilt Handles - 21/7

**CHAMPION'S
KUMFI-KUT
Baby's nail scissors**

Made by :—
Champion (Scissors) Ltd.,
35, Kumfi-Kut Works,
Hoyle Street, Sheffield, 3.

London Office :—
Finsbury Court,
Finsbury Pavement,
London, E.C.2.

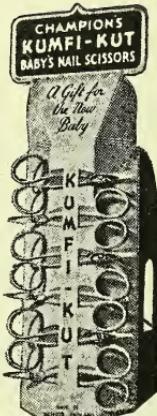


SAN TOWELS
MADE WITH THE FINEST MATERIALS
SOFT KNITTED COVERING WITH LOOPS

Highly absorbent
beautifully soft
hygienic
economical

M. MERICA & CO LTD
QUEENS MILL, 20 SHAW ROAD
OLDHAM, LANCS.

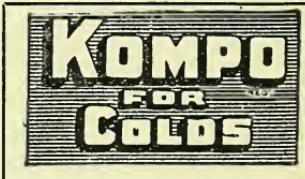
Telephone : MAIN 5803



**STOCK IGLODINE Regd.
ANTISEPTIC**

For Internal and External Use
"IGLODINE" is an all-British safe antiseptic. There is a steady all-the-year round demand. Our terms show a very generous profit.

IGLODINE SPECIALITIES
(On the P.A.T.A.)
Antiseptic, Pastilles, Nasal Douche, Ointment, Throat Tablets, Suppositories, Embrocation, Salicylated, Toilet Soap, Shaving Stick, First Aid Outfits, Igloplast Eye Lotion Cremor. The Igiodine Co. Ltd. Pilgrim St. Newcastle-on-Tyne



Manufactured only by
J. F. WHITE & CO., LTD.
Lovington Laboratory, Benson Street, Leeds.

NATIONAL ADVERTISING CAMPAIGN



**introducing
new pack**

RED HEART CANNED DOG FOOD

Plentiful supplies again !

After ten years of severe shortage, Britain's most popular dog food is reasonably plentiful once again. Packed in a new $\frac{1}{2}$ -lb. aluminium container and backed by a nation-wide advertising campaign, the demand for RED HEART will be immediate and steady. Obtain your supplies now through your usual wholesaler.

JOHN MORRELL & COMPANY LIMITED • LIVERPOOL AND LONDON

★ PRESSED MEDICINE TUMBLERS SUPPLIED IN 1 OZ. AND 2 OZ. SIZES ★

EYEBATHS, FOUR DIFFERENT TYPES IN WHITE FLINT, ACTINIC GREEN OR DEEP BLUE



★ INFANTS' FEEDING BOTTLES, UPRIGHT AND DOUBLE-ENDED ★

WITH MOULDED GRADUATIONS IN TABLESPOONS, TEASPOONS, FL. OUNCES AND DRACHMS

What is the EASIEST SELLING flyspray?

Every time it's Cooper's . . . because Cooper's Household Flyspray does the job more effectively, knocks down flies quicker and, what's more, the ample D.D.T. content makes sure they never get up again. Moreover, if sprayed lightly over walls, light fittings etc., an 'invisible' non-staining film of insecticide is deposited that goes on killing for weeks. Cooper's Household Flyspray also has a pleasant smell. It sells easily, and this year a lot of selling is being done for you in the leading Women's Journals. So be ready to meet the demand for Cooper's Household Flyspray. Order your supplies now, or write for current Trade list.



COOPER'S

The Housewife's Choice



COOPER, McDougall & Robertson, LTD., Berkhamsted, Herts. — ESTABLISHED 1843.

50C/20

ss |

June 24, 1950



HAYCOCK PRESS LTD.

106 to 140 NEATE STREET,
LONDON, S.E.5.

TELEPHONE: WODNEY 3865 (10 LINES)

TELEGRAMS: MACAPRINT, CAMBER, LONDON

The Advertiser,
Everywhere.

Dear Sir,

We should like to bring to your notice the facilities which we can offer you at our printing works at the above address.

In our letterpress section we have a battery of up-to-date two-revolution presses for periodical and first-class colour work, supported by an efficient composing department.

Our lithographic section is laid out to produce well-nigh everything that can be supplied to produce process — photo litho, deep offset, music and book printing, posters, offset or direct, and showcards of every description.

Both these departments are served by an amply equipped warehouse.

With these facilities we feel that we can give an all-round printing service second to none in the country.

Yours faithfully,
THE HAYCOCK PRESS LIMITED.

LITHO • LETTERPRESS • PERIODICAL & GENERAL PRINTERS



5,000,000

POTENTIAL CUSTOMERS



- ★ 5 million women in this country use nail polish
- ★ 5 million women have now heard of this new manicure aid through nation-wide publicity
- ★ Display this attractive showcard and sell

Steddie

THE MANICURE AID

- ★ Order now from your wholesaler and increase your turnover

PARAGON (BRUSHES) LTD., 157/161 REGENT STREET, LONDON, W.I.

NATIONAL

for White Flint Glass Containers of Quality
for delivery from stock, in convenient easily-handled cartons



DISPENSING BOTTLES

1-oz. to 20 oz. Plain—
Cork Mouth or Screw.
2-oz. to 16 oz.—Plain or
Graduated.

RIBBED OVALS
Cork Mouth or Screw.

VIALS
½-oz. 1-oz. 1½-oz. 2-oz.
3-oz. Medium or Tall.

TABLET BOTTLES

Nos. 1 to 7½ sizes.

ROUND SCREW JARS

½-oz. 1-oz. 2-oz. 4-oz.
Also Round Squat Screw
Jars 1½-oz., and 2½-oz.

SCREW CAPS

White Enamelled Tin-plate,
Aluminium and
Black Bakelite.

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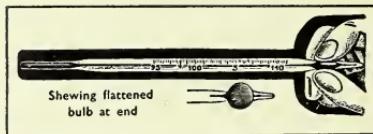
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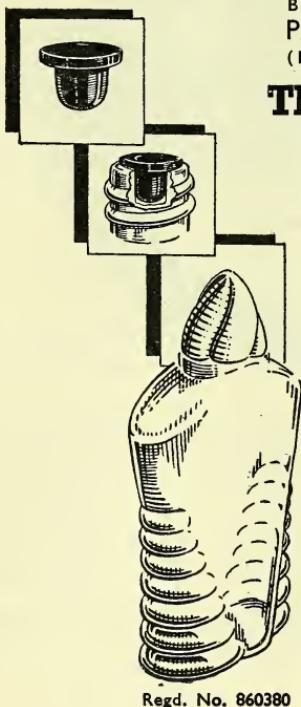
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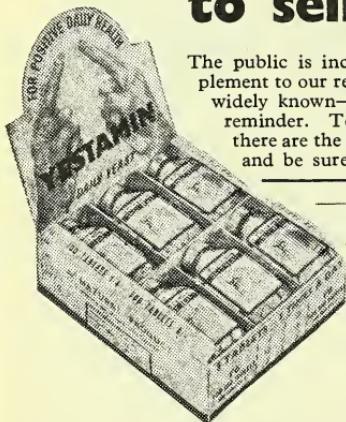
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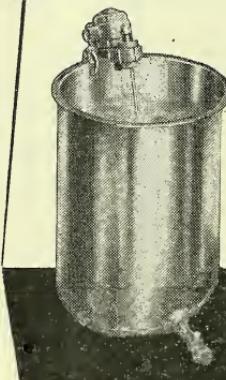
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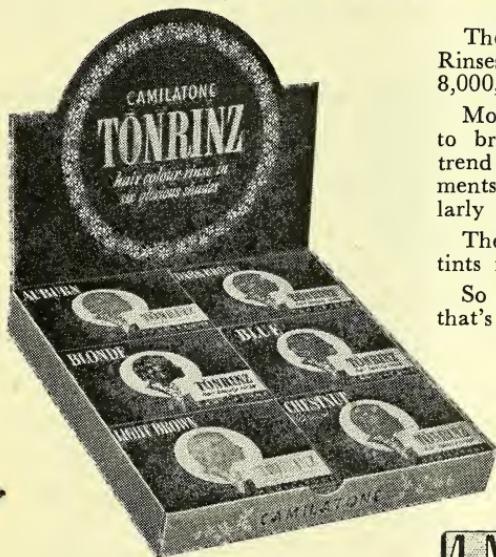
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